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SOVIET AND CZECHOSLOVAKIAN PARAPSYCHOLOGY RESEARCH (U)

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SOVIET AND CZECHOSLOVAKIAN PARAPSYCHOLOGY RESEARCH (U)

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PREFACE

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SUMMARY

During the past 25 years, Soviet and Czechoslovakian parapsychologists have reported that paranormal phenomena such as extrasensory perception (ESP), telepathy, and psychokinesis (PK) have been demonstrated under rigorously controlled laboratory conditions. Skeptics in both nations have attacked the study of such phenomena on both scientific and political - ideological grounds. Criticism based on political ideology has stemmed from the fact that such past research has been non-materialistic in the sense that results have not been reported in terms of contemporary conventional science. Thus the critics feel that parapsychology has fostered continued belief in mysticism, occultism, and religion.

In order to rebut the skeptics' contentions that psychic phenomena do not fit accepted scientific and political thought, Soviet and Czech scientists now argue that there are many well established "facts" which remain as anomalous to scientific paradigms as extrasensory perception (ESP). ESP refers to information which is not received via the usual senses, and as a general term, includes telepathy (the Soviet "biocommunication") and psychokinesis or PK (the Soviet "biaenergetics"). Communist parapsychologists argue that after decades of research, conventional science still has no satisfactory neurophysiological explanation of memory, nor is there any appropriate model for explaining how raw data impinging on man's senses are transformed into a conscious experience. They also point to the dematerialized character of contemporary physics, a science filled with such bizarre components as advance potential (waves of electrons perceived before they are generated), tunneling effects (electrons penetrating barriers which, by the laws of probability, should be impenetrable), and tachyons (particles traveling faster than light, and thus implying the possibility of a backward flow of time). In short, they conclude that "hard" science no longer offers a secure rationale for the denial of the possibility of any noncausal event.

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PART I

EXTRASENSORY PERCEPTION (ESP)

SECTION I - BACKGROUND

Parapsychology is a field involving research on the informational and energetic possibilities of the psychic and biophysical activities of living organisms. Parapsychology investigates the complex of phenomena relating to the interaction of living organisms with each other and with the surrounding environment without the mediation of the known sense organs or of presently identified energy transfer mechanisms. Western parapsychologists refer to this complex of phenomena as extrasensory perception (ESP) and psi phenomena.[1]

The Soviets prefer the term biocommunications instead of parapsychology, psi phenomena, or ESP. Other Soviet terms which are equivalent to the term parapsychology include psychophysiology, psychotronics, psychoenergetics, and biophysical effects. The Soviet term biocommunications can be further subdivided into two general classifications: bioinformation and bioenergetics. Bioinformation includes paranormal events between living organisms (telepathy, precognition) and events between living organisms and the inanimate world. Bioenergetics denotes activities such as biological locator and indicator techniques (dowsing), bioenergetic therapy using electromagnetic (EM) fields, and psychokinesis, or the influence of bioenergy on matter. Definitions of the terms biocommunications, bioinformation, and bioenergetics are as follows:[2]

BASIC TYPES OF BIOCOMMUNICATION PHENOMENA (I)

General: Biocommunications

A branch of science involved with the human capability of obtaining information from other than the normal senses and the ability to respond to or reasonably interpret such information. Bio communications, also synonymous with parapsychology, is, however, distinct from other sciences in that it is primarily concerned with determining the nature of a definite group of natural phenomena controlled by laws which are not based on any presently known energetic influence.

TYPE I: Bioinformation

Those phenomena associated with the obtaining of information through means other than the normal sensory channels, e.g. - through extrasensory perception (ESP). There are several forms of ESP, including:

a. Telepathy, transmission, or "reading" of thoughts, refers to the extrasensory reception of information about the mental processes of others.

b. Proscopy or precognition is a form of ESP which, under certain circumstances, involves crossing the barrier of time to obtain information about future events.

c. Paragnosia or clairvoyance refers to the extrasensory reception of information about objective events in the outer world.

TYPE II: Bioenergetics

Bioenergetics involves phenomena associated with the production of objectively detectable effects through means other than known energetic influences. Seemingly incredible effects have been reported, such as the movement of distant objects without any detectable use of physical force (psychokinesis or telekinesis), antigravitational effects, transformations of energy, electromagnetic effects arising without adequate physical cause, and chemical reactions and biological processes occurring through mental concentration.

A comparison of US and Soviet parapsychology terms is given in Figure 1.

Fig. 1 Comparison of US and Soviet Parapsychology Terms (U)

US		Soviet
Parapsychology)		(Biocommunications
PSI Phenomena)		(Psychophysiology
ESP)	Equals	(Psychotronics
		(Psychoenergetics
		(Biophysical Effects

Biocommunications

A. Bioinformation
B. Bioenergetics

Telepathy) Equals Bioinformation
Precognition)

Dowsing) Equals Bioenergetics
Psychokinesis)

In recent years, Czechoslovakian parapsychologists have begun using the term "psychotronics" in reference to all aspects of their paranormal phenomena research. They define psychotronics as the study of those borderline phenomena and signs of human existence that have a psychosomatic base, but manifest themselves in such a way that they more or less exceed the framework of this base. Such phenomena include autosuggestion, hypnosis, telepathy, psychokinesis, and other paranormal effects and phenomena. The Czech term does not encompass the study of stigmata, levitation, etc., since these are considered to be hallucinatory states or processes and, as such, areas of investigation and treatment more appropriate for psychology or psychiatry.[3] In general, however, the Czech science of psychotronics includes the study of all phenomena presently being investigated by Soviet and Western parapsychologists.

Current Soviet and Czech parapsychological terms and objectives have evolved in a climate of fluctuating political pressure. Scientists in pre-revolutionary Russia studied parapsychology as did later such Soviet scientists as V.M. Bekhterev, A.G. Ivanov-Smolensky, and I.N. Kazhinsky in the twenties and thirties.[4] In 1924, A.V Lunakharsky, Commissar for Education, took the initiative in forming a Soviet Committee for Psychical Research. As a result of Academician V.M. Bekhterev's enthusiasm for the subject, extensive work was financed at the University of Leningrad Institute for Brain Research. L.L. Vasiliev, a former student of Bekhterev's demonstrated to his own satisfaction that telepathic influence at a distance may indeed occur. Work flourished throughout the thirties with research being reported in the literature in 1934, 1936, and 1937. After 1937 further experiments in the field of parapsychology were forbidden. During Stalin's time, the study of paranormal phenomena was interpreted as a deliberate attempt to undermine the doctrines of materialism. Telepathy was treated as a mystical and antisocial superstition and nothing further was heard of parapsychology in the Soviet Union until the late 1950s. Then, as a result of French newspaper articles, rumors began to circulate that American researchers had disproved the "brain-radio" theory as a result of ship-to-shore telepathy experiments involving the US atomic submarine Nautilus. The Nautilus 'experiments" probably were mythical, but the claims had one tangible consequence: the Soviet authorities permitted Vasilev, then Professor of Physiology and holder of the Order of Lenin, to publish his own earlier work in which decades previously he had proven to his own satisfaction that radio-type brain waves did not mediate telepathy. Vasilev was also allowed to open a unit for the study of parapsychology at the Institute for Brain Research. His work first reached the West with an English translation of his monograph "Experiments in Mental Suggestion" in 1963. The result was instant international interest. Numerous Western researchers traveled to the Soviet Union and found a fair amount of activity and interest in the paranormal, although the research approaches were frequently different from those in the West. Soviet workers tended to be far more preoccupied with whole-body physical and biological effects rather than with the "mental" phenomena with which Western researchers had long been preoccupied.

Some of the first parapsychologists to visit the Soviet Union after the publication of Vasilev's work described the differences in atmosphere pervading two conferences in 1963 and 1968. During the first, free and cordial exchange of views was possible; the second was overshadowed by an article in Pravda attacking parapsychology which largely wrecked the formal plans for the program. Most of the Soviets declined to speak, Western visitors were pressed to deliver impromptu lectures, and the House of Friendship in Moscow withdrew its invitation to hold further meetings or allow films to be shown there. From this time onwards, with certain

fluctuations, official hostility towards parapsychology increased in the Soviet Union. For example, Soviet authorities took the strongest possible exception to a best-seller in the West, Ostrander and Schroeder's "Psychic Discoveries Behind the Iron Curtain."[5] Eduard K. Kasanov, then Director of the Institute of Technical Parapsychology, Moscow,[6] was cited throughout as the journalists' guide and mentor. Unfortunately, the Voice of America beamed a radio program into the Soviet Union discussing the Schroeder and Ostrander book, a broadcast that was construed as a politically motivated attack using parapsychology as a weapon. Apart from this episode, it is not entirely clear why Soviet officialdom should have taken such fierce exception to a frankly popular, sensational, and rather chaotic book, which was not taken seriously by many Western scientists. The most plausible interpretation seems that the Soviets were worried that they might be believed by the world's scientific community to be self-proclaimed champions and leaders of parapsychology. In fact, Soviet scientists are just as divided among themselves concerning parapsychology as scientists elsewhere and since 1972, a number of openly critical publications concerning parapsychology research have appeared in the Soviet Union. A few examples of such open attacks follow.

In 1972, V.M. Bleykher (a reputable Soviet neurophysiologist) published a book titled "Parapsychology - Science or Superstition." In an annotation to this book [illegible], in fact, as the lead paragraph) Bleykher stated, "This book is designed [illegible] to debunk parapsychology." The book began with such arcane and archaic topics as phrenology (headbump reading) and ended with a chapter prefaced by a cartoon showing a broom sweeping the Russian word "parapsychology," out of the picture. The entire bias of the book was to make a direct link between 19th century "spiritualism" and 20th century parapsychology.

In 1973, Kazakhstanskaya Pravda (Alma-Ata) carried an article by Doctor of Medical Science V. Podachin, titled "Careful: Paramedicine!" In his article Podachin openly attacked "unproven telepathic transmission of information over distances from one person to another on the basis of their neuropsychic states," and criticized parapsychologists "for claiming to obtain results that are completely unrelated to the cause-and-effect principle."

In October 1973 a long and detailed paper entitled "Parapsychology: Fiction or Reality?" was published in Questions of Philosophy, an official publication of the Soviet Academy of Pedorogical Sciences, by four eminent members of the Moscow Academy of Pedagogical Sciences, V.P. Zinchenko, A.N. Leontiev, B.F. Lomov, and A.R. Luria. They explicitly set out "to express the viewpoint of the USSR Society of Psychologists

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towards parapsychology." "Obviously," they wrote, "some so-called parapsychological phenomena do happen; however, the main obstacle to the acceptance of their existence is ignorance of the basis of their operation." It is not clear from this paper just which parapsychological phenomena "obviously do happen;" the only ones which the authors unambiguously supported as authentic were Kirlian photography (radiation field photography by means of which the biological energy fields of plants and animals may be visualized) and "dermal-optical vision" (the alleged ability to see colors through opaque shielding by touch alone). Paradoxically, Kirlian photography is probably based on known forms of energy, while dermal-optical vision has no known basis in fact. A large portion of the paper was in fact devoted to a denunciation of "militant parapsychologists," popular credulity, fraudulent practices, physicists who quite unnecessarily change their jobs to investigate paranormal phenomena, sensationalistic journalists, and institutions such as the Institute for Technical Parapsychology (which was cited by name). Apparently, the objective of the paper was to discredit as much any idea of a "parapsychological movement" in the Soviet Union, and to insure that the science of parapsychology should not continue to emerge. To quote the authors, "there is no need for parapsychology to exist as a separate discipline."

There is additional evidence that the official attitude toward parapsychology in the Soviet Union may have changed. In the 1960's, Moscow parapsychologist Edward K. Naumov was recognized internationally as the unofficial Soviet spokesman for the science. In March of 1974, Naumov was arrested and sentenced to two years hard labor. In January 1975, parapsychologist Larisaa Vilenskaya, who had previously been permitted to visit Naumov in jail, was herself arrested. The reason for her arrest is not known, but Naumov was apparently convicted of taking fees for his lectures without the permission of the appropriate authorities. According to reports from the Soviet Union, the fees seem to have been collected in the normal way by the club's director and his assistant. However, both were subsequently declared psychologically unfit to testify, certified schizophrenic, and referred for some unspecified form of involuntary treatment at the Serbskiy Institute of Forensic Psychological Expertise. This Institute's director, Dr. Andrej Snezhnevsiy, is widely known for his psychiatric zeal on behalf of ideological orthodoxy and for his opposition to parapsychology. At the trial Snezhnevsiy himself gave evidence to the effect that parapsychology was a pseudoscience based on idealism and mysticism. Although 40 witnesses said they had bought their tickets from the club's director or his representative, Naumov was found guilty and sentenced to two years in a camp. According to Lev Kopelson, a Moscow physicist, Naumov's offense was twofold: first, despite reiterated warnings from the KGB he had "maintained free, personal, human contacts with foreign scholars..." and made use of the material he received

for disseminating information on parapsychology in the USSR. Naumov's second fault is ideological. Up to most recent times parapsychology has been looked on in the Soviet Union as "mysticism" and "pseudoscience," sharing the fate of the theory of relativity, quantum mechanics, cybernetics, genetics, etc.

Naumov's trial and the dismissal from their posts of others who had been active in parapsychology in the Soviet Union in the 1960's may mark the end of a phase during which free and indeed spirited discussion of parapsychological topics was permitted throughout the Soviet Union, and during which a fair amount of informal and unofficial East-West contact was at least tolerated.[8]

Despite apparent shifts in the official attitude toward the science, 49 out of the 94 papers presented in 1973 at the First International Conference on Psychotronic Research in Prague, Czechoslovakia, were authored by Soviet or ECC researchers. In addition, the Moscow publication "Zhurnalist," published a lengthy editorial[9] in 1974, in which readers were assured that "all energy fields existing in nature are not known to contemporary physics" and "that because various phenomena cannot as yet be explained does not mean that they do not exist." The name of the science may be changed in the future, but the research will continue.

During the past decade parapsychology has undergone many changes in the Soviet Union and Czechoslovakia. In a sense, this is a question of changing generations. The elder generation of researchers, who actively investigated the problems of psychotronics, regarded it predominantly as philosophy and psychology. To a certain extent, this concept determined their approach to the problems: in most cases they concluded that very complex psychic processes were involved, processes that were difficult to control and hence were not always reproducible. This older generation of researchers had as their primary objective the proof of psychic processes and the defense of their theories. They confined themselves to their own specifics and problems. In terms of the quantity of accumulated facts and performed experiments their work was considerable and often awe-inspiring.

Researchers of the younger generation in the USSR and Czechoslovakia are beginning to regard this concept as one-sided, a straitjacket. They are not satisfied with the constant proving and description of the phenomena. They also want to model, amplify, formulate and compute. A desire to conclusively master the problems has compelled them to abandon the previous concept and to define parapsychology for the time being, as a borderline interdisciplinary science. To the unipolar philosophical-psychological concept there is now added another pole, the technical-physical concept. Between these two poles there is sufficient room for parapsychology to comprehend all the phenomena that it investigates, in their complexity.

Present-day Soviet parapsychologists are recruited from practically all scientific disciplines, not as individual enthusiasts but as members of coordinated interdisciplinary teams of specialists. In 1967 the Czechs established the Coordination Group for Psychotronic (parapsychological) Research. They intentionally set as one of their principal objectives the description of the undetermined properties of the energy bound to man and to animate nature. They appear to be convinced, for example, that de Broglie's dual concept, in which the electron may appear as a mass of inertia or as electromagnetic radiation, requires a third aspect (the vehicle of which would not necessarily be de Broglie's electron but possibly the mental ion or "mention" presupposed by Professor F. Kahuda), and that only then will it be possible to completely express the animate and inanimate world of matter in motion. By defining the parameters of the undefined form of energy the concept of matter in motion could gain a third aspect, and matter in motion would be defined by laws far more complex and comprehensive than at present. It is interesting to note the increasing validity of Professor L.L. Vasilev's statement that "...discovery of the laws of the as yet unknown form of energy bound to man will be of no less significance than the discovery of atomic energy." Therefore it is no coincidence that theoretical physicists and plasma physicists in the Federal Republic of Germany believe that understanding of the psychical-physical interactions of living organisms will add something basically new to physics and biology. The Czechs believe that as soon as science begins to understand the properties of this new form of energy, questions of its mastery and utilization will rise to the forefront. Robert Pavlita's work, which is discussed in detail in Part II, is no small contribution in this direction. Whereas in the past parapsychology operated predominantly by the method of exceptional individual performance, psychotronics presupposes a new model: the living organism (man)—processing of energy—performance.

In 1982, a century will have elapsed since the foundation in England of the first Society for Psychical Research. Zdenek Rejdak, internationally renowned parapsychologist of the Czechoslovak Scientific and Technical Society, Section for Psychotronic Research has stated, "We are convinced that psychotronics will mark this centennial with significant results in practical, applied, and basic research, in the knowledge that it will become an essential new anthropological science, one that will enhance primarily man's integrity."

SECTION II - TELEPATHY (ENERGY TRANSFER) IN ANIMALS

Soviet and Czechoslovakian parapsychologists have not reported "telepathy" in animals in recent years; instead, they have emphasized research on biological energy transfer. Soviet parapsychology research is multidisciplinary and indistinguishable from conventional Soviet physiological research. Both disciplines are presently involved in attempts to identify the sources of internally generated and externally imposed stimuli underlying physiological processes.

Soviet research on telepathy in animals in the 1920's and 1930's was devoted largely to proving that telepathy between man and animals did indeed exist. A good example of the early Soviet approach was research conducted by V.M. Bekhterev of Leningrad University, in collaboration with a circus performer, V.L. Durov. Bekhterev reported that Durov's trained dogs successfully solved arithmetic problems and identified or retrieved objects solely on the basis of their trainer's mental suggestion.[10] The results of these tests were controversial, since the dogs' performances were good when Durov was present and supplied the "suggestions," but deteriorated markedly when he was absent and another individual attempted to mentally control them.

Bekhterev's original objective was to demonstrate that telepathy between man and animals was mediated by some form of electromagnetic radiation (EMR), but by 1937, he and other Soviet parapsychologists had concluded that no known form of EMR was the carrier of thought transmission. The EMR theory of information transfer is still unresolved by the Soviets, but is still the major basis underlying much of their research.

In 1962 B.B. Kazhinskiy advanced the theory that animals are capable of visual and aural perception and reflex understanding of the behavior of other animals or humans.[1] He postulated that this ability resulted from the capacity of one animal to detect (via its nervous system), analyze, and synthesize signal-stimuli given off by another animal. According to Kazhinskiy, the signals were transmitted in the form of a "bioradiational sight ray" and analyzed by the percipient animal as a result of its Pavlovian conditioning. The term "bioradiational rays" is still used by some Soviet and Czech parapsychologists to refer to focusing and concentration of biological energy by the brain and the optical neural channels.

Present day Soviet and Czech parapsychology research with animals is devoted almost exclusively to investigation of sources of biological energy involved in physiological processes, the interactions of such energy with external fields, and the effects of externally generated fields on animal physiology. Reference to telepathy in the sense of communications by transmission of total, conceptual, mental formulations is seldom made.

A significant advance toward identification of the EMR source of biological energy transfer was gained from recent research conducted at the University of Novosibirsk. Scientists there investigated the release of energy during cell division and during cellular damage and repair resulting from viral infection or toxic chemicals. In over 5000 experiments with cell cultures and animal organs it was shown that damaged cells radiated some form of energy and that the energy released was capable of causing damage in adjacent control preparations of organs or cells. Further investigation revealed that a uniform pattern, code, or rhythm of radiation was emitted by normal cells. This pattern was disturbed when cellular damage occurred, becoming quite irregular. It was also found that the patterns were transmitted from experimental to control preparations only when the cells or organs were cultured in quartz containers. Since quartz transmits ultraviolet (UV) radiation and standard laboratory glassware does not, the Soviets concluded that UV radiation mediated cellular information transfer. The researchers subsequently correlated given irregularities of emission with specific diseases and are now attempting to develop techniques for diagnosis and therapy by monitoring and altering cellular radiation codes.[6]

Czechoslovakian research on energy transfer between animal muscle preparations, from animals to man, and from man to man, has also demonstrated EMR as the vehicle of biological energy transfer. In experiments conducted between 1948 and 1968 at the Okres Institute of Public Health, Kutna Hora, Czechoslovakia, Dr. Jiri Bradna demonstrated contactless transfer (myotransfer) of stimuli between frog neuromuscular preparations. Bradna placed identical preparations side by side; stimulation of one preparation with electric pulses at frequencies between 10 and 30 pulses per second caused contraction and a recorded electromyographic response in the other. In other experiments, stimulation of muscle preparations influenced the oscillations of a pendulum and increased the muscle tension of a human subject. Bradna obtained objective proof that energy in the very high frequency (vhf) range mediated the stimulus transmission. He also demonstrated that myotransfer could be blocked with ferrous metal filters and aluminum, could be deformed with magnets, ferrites and other conductors, could be reflected and transmitted over waveguides, and shielded with grids. Bradna concluded that primary perceptual and informational pathways between animals are based on metabolic processes at the macromolecular level and that the magnitude of energy transfer depends on muscular adenosine triphosphate (ATP) energy release.[12]

Bradna has reported successful application of myotransfer in physiotherapy. It has been found to be effective for both individuals and groups. In the latter case, the summation of stimuli has been shown to enhance the neuromuscular responses of individuals within the group. Bradna feels that such stimuli influence the herd behavior of animals and may also be a factor in altering human behavior under conditions of isolation or overcrowding.

In the Soviet Union, Doctor Y.A. Kholodov has investigated the effects of a constant magnetic field (CMF) on rabbits.[13] Whole-body exposures to fields between 30 and 2000 oersteds resulted in nonspecific changes in the electroencephalogram, but no other directly measurable physiological responses. Kholodov showed that weak magnetic as well as other externally generated radiation fields have a direct effect on nerve tissue, and for this reason he feels that natural and artificial fields in man's environment may have an influence on health and behavior via the nervous system and the hypothalamus. Kholodov's research is representative of current Soviet efforts to explain paranormal phenomena on the basis of known physical and biological parameters.

Another Soviet scientist, A.S. Presman, feels that biological energy and information exchange between living organisms is the result of electromagnetic field (EMF) interactions between individuals or between the individual and the environment.[14] He and other Soviet scientists have recorded EMF's from man, frogs, and insects of various species at ranges from several centimeters to several meters from the body surface. The frequencies of the EMF's were found to correspond to various biorhythms of organs, rhythms of movement and acoustic signals, and bioelectric rhythms. Presman thinks that in groups of animals, electromagnetic oscillations are synchronized by frequency matching and that the cumulative intensity may grow in proportion to the square of the number of individuals. Such cumulative emission is also thought to be possible as the result of synchronization of the emissions of many cells in animals in a highly excited state.

Presman, like Kholodov, feels that the effects of subthreshold stimuli are mediated through the hypothalamic region of the midbrain. The hypothalamus regulates diverse physiological processes in the organism (pulse, body temperature, oxygen consumption, carbon dioxide liberation, urine volume, urine nitrogen concentration, etc.) and these are the functions most commonly disturbed by changes in EMF's.

Presman believes that electromagnetic signalling is universal between animals, but not between humans who may have lost the capability for such communication as a result of evolution and the development of verbal and artificial communication channels. He does not rule out the possibility that "spontaneous telepathy" may occasionally occur, but regards such occurrences as rare cases of atavism. Consequently, he regards man as the least suitable animal for studying electromagnetic communication.

It is important that the increased degree of sophistication which has occurred in Soviet ESP or telepathy research since 1960 be understood. At present the terms "ESP" and "telepathy" are seldom used. It is possible that the newer terms "biocommunication" and "psychotronics" will vanish in the near future only to be replaced by conventional high-energy physics

terminology, or terms such as "interpersonal subconscious reactions" or "mention" forces. In any event, the classical ESP experiments with animals are no longer of interest in the USSR. The typical Vasilev experimentation from 1920 to 1955 has been replaced with sophisticated research protocols which study complex interactions between man, animals and plants.

Dr. Pavel Naumov, who bears no relation to the now imprisoned Edward Naumov, conducted animal biocommunication studies between a submerged Soviet Navy submarine and a shore research station; these tests involved a mother rabbit and her newborn litter and occurred around 1956, three years prior to the U.S.S. Nautilus disclosure. According to Naumov, Soviet scientists placed the baby rabbits aboard the submarine. They kept the mother rabbit in a laboratory on shore where they implanted electrodes (EEG?) in her brain. When the submarine was submerged, assistants killed the rabbits one by one. At each precise moment of death, the mother rabbit's brain produced detectable and recordable reactions. As late as 1970 the precise protocol and results of this test described by Naumov were believed to be classified. Many examples can be found in Soviet literature dealing with dogs, bears, birds, insects, and fish in conjunction with basic psychotronic research. The Pavlov Institute in Moscow may have been involved in animal telepathy until 1970.

SECTION III - TELEPATHY (ENERGY TRANSFER) IN MAN

PART A - Classical Theories and Experiments

Over the past 25 years, Soviet scientists have reported that abilities such as extrasensory perception, clairvoyance, and telepathy have been demonstrated in the laboratory under rigorously controlled conditions. Many of these claims have been published in the Soviet technical and popular literature. Just how far the Soviets have really gone in their efforts to learn about the mechanisms of human telepathy is not known. If the Soviet reports are even partly true, and if mind-to-mind thought transference can be used for such applications as interplanetary communications or the guiding of interplanetary spacecraft, the Soviets have accomplished a scientific breakthrough of tremendous significance.

For many years, any attempt to study telepathic phenomena was denounced in the Soviet Union as mysticism and idealism. From 1922 to 1959, however, this attitude gradually changed. Official recognition of parapsychology as a legitimate science was prompted to a considerable extent by the Party's recognition of other disciplines which had previously been rejected as bourgeois idealism (quantum mechanics, the theory of relativity, and cybernetics). In 1959 Professor L.L. Vasilev published his "Mysterious Phenomena of the Human Psyche," followed in 1962 by his "Experiments in Mental Suggestion." These two publications caused some surprise among Western scientists, but the possible military implications were apparently overlooked in the West. The first attempt to illustrate the possible military and intelligence impact of Soviet research in telepathy and psychokinesis was published in 1972.[15]

The publication of Vasilev's first book in 1959 was followed by the appearance of countless studies by other Soviet researchers and numerous articles in the Soviet periodical press. Soviet parapsychology research gained impetus and sophistication, growing from a single laboratory into a coordinated USSR-wide effort; laboratories were also established in Czechoslovakia. Funds for research (reported at 20 million rubles in 1973) are believed to be primarily from military sources. This high level of support advanced Soviet research on human telepathy far beyond that of the West and the USSR became the leader in sponsoring and participating in international parapsychology symposiums. Such international meetings have served Soviet interests by allowing them to benefit from Western research.

After 1959 large numbers of Soviet scientists began investigating telepathic communication. In 1965, a bioinformation department was formed

at the Moscow section of the Scientific-Technical Society of Radio Engineering and Telecommunications imeni A.S. Popov, with the purpose of furthering scientific research on information transmission "in the living part of nature." The early Soviet objectives which were made public were: (1) to study and organize relevant materials from the world literature; (2) to record and systematize observed occurrences of "spontaneous" telepathy; and (3) to develop and organize experiments on artificially initiated telepathic occurrences.

At a meeting of the Bionics Department of the Presidium of the Academy of Sciences of the USSR in 1965, I.M. Kogan raised the following three questions: (1) is telepathy possible in principle; (2) does it contradict natural laws; and finally, (3) do the observed facts agree with the concept of electromagnetic fields?[16] To answer these questions, the following hypotheses have been advanced in the USSR:

(1) The electromagnetic hypothesis (1892), advanced as a result of the discovery of electromagnetic waves in 1888. By the mid 1960s this hypothesis had been subjected to considerable criticism. The entire range of the electromagnetic spectrum from gamma rays to radio waves had been studied; throughout this range there was not a single sector in which telepathic communication could be established. Experiments with reliable forms of metallic shielding had not prevented the percipient from receiving messages transmitted to him (also verified in the test). Moreover, the effectiveness of "signals" transmitted over hundreds or thousands of kilometers should, according to the theory, diminish in proportion to the square of the distance; this has never been established in relevant experimentation. The electromagnetic hypothesis has not been rejected and some evidence indicates that there may be electromagnetic waves of some unknown length emitted by the brain which are capable of penetrating metallic obstacles.

(2) The metaethereal hypothesis, borrowed from French parapsychology. This presupposes the existence of some unknown metaethereal energy, the oscillations of which can be detected only by special organs of "cryptoaesthetic sensitivity," possessed by persons endowed with parapsychic abilities.

(3) The psychic energy hypothesis. According to this theory, bioelectrical charges in the "working" brain of the inductor are transformed into psychic energy which is transformed back again into bioelectric charges in the "receiving" brain of the percipient.

(4) L. Vasilev proposed the gravitational hypothesis, first formulated by the German physicist Pascual Jordon and Einstein's former collaborator Dr. B. Hoffman. Vasilev suggested that an interaction between the

gravitational field and some existing but unexplained factor, possibly produced by the cerebal matter itself, might be involved in telepathic communication. He also suggested that thought transmissions might be connected with the laws of cybernetic systems. Vasilev also referred to the action of neutrino particles formed during nuclear reactions.[17] If it could be established that such particles (which have no electric charge, move with a speed approaching that of light and are capable of penetrating obstacles of enormous mass) are generated during the neuropsychic activity of the brain, it might conceivably be shown that these particles serve as the medium for telepathic transmissions.

The Soviets' renewed interest in the problem of parapsychology during the 1960s constituted, to a certain extent, another aspect of the trend away from doctrinaire control which had previously dominated all areas of intellectual effort in the USSR. The easing of intellectual control was exemplified by a quote from Laplace's "Essai Philosophique sur les Probabilities" used by Professor Vasilev:

> "We are so far from knowing all the forces of nature and their various modes of action that it would be unworthy of the philosopher to deny phenomena simply because they are inexplicable at the present state of our knowledge. The more difficult it is to acknowledge their existence, the greater the care with which we must study these phenomena."[18]

Vasilev himself said:

> "It has happened more than once in the history of science that the establishment of new facts that were unexplainable by what was already known gave us a glimpse of unforeseen aspects of existence."

Such was the climate of Soviet parapsychological research in the early 1970s; Soviet science, for all its characteristic pragmatism, had apparently begun to free itself gradually from the restraints of an outworn materialistic foundation which on more than one occasion had shown its flimsy bases when faced with new discoveries. However, as noted in Section I, there may now once again be a fairly concerted effort on the part of some highly placed Soviet scientists in other disciplines to undermine parapsychology on political-ideological grounds.

In 1966, F. Zigel, a renowned Soviet astronomer, concluded that telepathy is the science of the future. In order for it to become a service to mankind, research in telepathy must be organized on a statewide basis. Otherwise, after a short while, "reproaching ourselves for past mistakes, we again would have to catch up with foreign countries. If the insulting remarks addressed to scientists engaged in telepathic

studies were made privately they could simply be ignored. Such criticisms, however, are aired publicly in the press by people of incontestable authority in other fields. What happened to genetics and cybernetics is now being repeated again and again. One can no longer remain silent, but must take the full responsibility of stating that "criticism" of telepathy is tantamount to militant obscurantism."[19] Zigel's words did not go unheeded because by 1968 the Soviets already had: (1) established several research centers specializing in telepathic experiments on an academic and scientific level; (2) organized teams of scientists—physiologists, physicists, psychologists, mathematicians, cyberneticians, neurologists, and electronic engineers—to investigate telepathy, find out how it works, and devise means of practical application; and (3) conducted experiments involving long-range thought transference (Leningrad-Moscow (600 km); Moscow-Tomsk (4,000 km)).

Without actually taking an unequivocal stand on the controversial issue of telepathy, Ye. Parnov,[20] in 1966, cited at least three paradoxes: (1) telepathic communication is independent of distance; (2) telepathic communication is achieved without the use of the known senses and has no apparent relation to electromagnetic waves; (3) some cases of spontaneous telepathy and clairvoyance contradict the law of causality. It should be mentioned that if Parnov had stated his third paradox a few years sooner it would have meant certain scientific and intellectual exile. However, Parnov attempted to ascertain the extent to which these paradoxes might fit into the fundamental laws of natural science, and thereby remained somewhat within the bounds of traditional dogmatic, materialistic principles.

Parnov felt that the first paradox might be resolved if: (a) the material carrier of the telepathic effect is some type of energy unlikely to dissipate in space, or (b) all people are linked together by a special "telepathic field." In the first case, the material carrier could conceivably be the neutrino which, at least within the earth's biosphere, is not absorbed by matter. In the second case, it might be surmised that, in addition to the inductor and percipient, telepathic phenomena involve an unspecified number of people for amplification of the telepathic signal, just as a photomultiplier amplifies light.

A similar explanation was applied to the second paradox; the "neutrino hypothesis," however, has its drawbacks. It is not quite clear, for instance, which type of neutrino is responsible for the transmission of telepathic signals. It is possible that all people are interlinked by a neutrino field, and this would support the amplification theory.

The third paradox is the least palatable to traditional scientists and the most susceptible to criticism by opponents of telepathy. Its explanation requires, by implication, the breakdown of well-established concepts regarding time and space. One of the ideas advanced by some

theoreticians is that of "closed time" in which such notions as past and future become relative even beyond the theory of relativity. By accepting such an idea, it must be assumed as a matter of fact that the human brain can somehow "locate" the future by means of the neutrino. Parnov observed that other theoreticians had hypothesized that the neutrino's peculiar behavior is due to the fact that this particle moves from the future into the past rather than the other way around. Such a concept would do justice to the third paradox. It is interesting to note that these paradoxes were expressed before theoreticians began extensive discussions on tachyons (particles said to have a velocity greater than that of light). Mental ions ("mentions"), having similar velocities of propagation, have also been postulated. They are discussed further in Part B of this section.

Another theory which could help explain the third paradox is based on the law of conservation of combined parity, advanced by L.D. Landau. According to that law, symmetry is preserved in any system whenever the "left" is substituted by the "right" and a particle by an antiparticle. It then appears that all relationships are invariant with respect to time inversion. Thus, Parnov concluded, the third paradox may contradict the letter, but not the spirit of modern physics.

I.M. Kogan, referred to earlier, was the first to publish experimental results in human telepathic communication in the post-Vasiliev era.[10,21,22] Only the qualitative and quantitative results will be presented here; the interested reader can peruse the above references for Kogan's research protocol. Kogan arranged his experiments in four groups (excluding experiments involving the use of hypnosis which can be found in an excellent article by Velinov);[23] the four groups included: (1) mental suggestion of an act involving objects at short distances; (2) mental suggestions of the image of an object and selection of a given object at short distances; (3) mental suggestion of object images over long distances; and (4) mental transmission of object images over long distances. None of the experiments reported by Kogan were inconsistent with the Soviet electromagnetic hypothesis. An analysis of the results revealed certain qualitative and quantitative characteristics common to all experiments. They were: (1) the rate of telepathic information transmission varied between 0.005 and 0.1 bit/sec.; (2) the rate of information transmission depended upon the distance the information had to travel, ranging from 0.1 bit/sec for a distance of several meters to 0.001 bit/sec for a distance of 4,000 km; (3) in telecommunications, the percipient did not take cognizance of the logical concept of the type of object being transmitted; normally, only qualitative images eliciting some kind of sensation (shape, color, hardness) were perceived; and (4) the best perception of telepathic information occurred when the messages were short (up to one minute). Transmission of simple, brief, coded combinations of elements (images, emotion) appeared to be the proper way of handling coded telepathic information.

Numerous Soviet experiments in human telepathic communication followed Kogan's work. Rapid Soviet advances in electronics, cybernetics, bionics, and neurophysiology brought new techniques to the study of telepathic phenomena. By 1970 the prime objective of Soviet telepathic research was reproducibility of results and Soviet scientists now say that in the future they will be able to make ample use of telepathic resources and to develop, direct, and control telepathic processes as well.[24]

PART B - Current Soviet/Czech Theories and Research Objectives

The most obvious trend of current Soviet and Czech telepathy research is that it is now causally oriented rather than directed toward pragmatic attempts to apply observed but little-understood phenomena. The previous "cart-before-the-horse" approach was not, however, an illogical one, since it led them to theorize that telepathic effects may be based on subtle, unidentified forms of energy or non-energy interactions.

In 1973 Peter Rezek of Prague stated that telepathy may be conceived of as transfer realized by means of some known or unknown type of energy, or is made possible by some non-energy factor that accompanies the functioning of the brain. Rezek questions G.A. Sergeyev's dedication to the interpretation of electroencephalograms (EEG) and wave measurements to uncover the carrier of transfer and feels that Sergeyev's approach is directed primarily toward the application of the investigated phenomena and not towards an understanding of them. He questions attempts to regulate or control psychic phenomena before their underlying causes are understood.[25] According to Rezek, ESP research and research on sense perception are similar since scientists in both fields are investigating the composition and structure of the apparatus by which transfer takes place. Perception, as such, in the natural science approach, is actually incomprehensible; nevertheless, the advocates of this approach are unable to accept telepathic phenomena because proof of energy transfer is lacking. Rezek feels that if the natural-science approach, which is unable to explain perception as such, were applied to ESP, this would make ESP doubly incomprehensible. Even if a wave motion is found to be associated with ESP, this phenomenon as such will again be incomprehensible. Rezek concludes that when ordinary sense perception become comprehensible, it may open the way to the understanding of telepathy. On the other hand, ESP could become the basis for an understanding of perception in general.

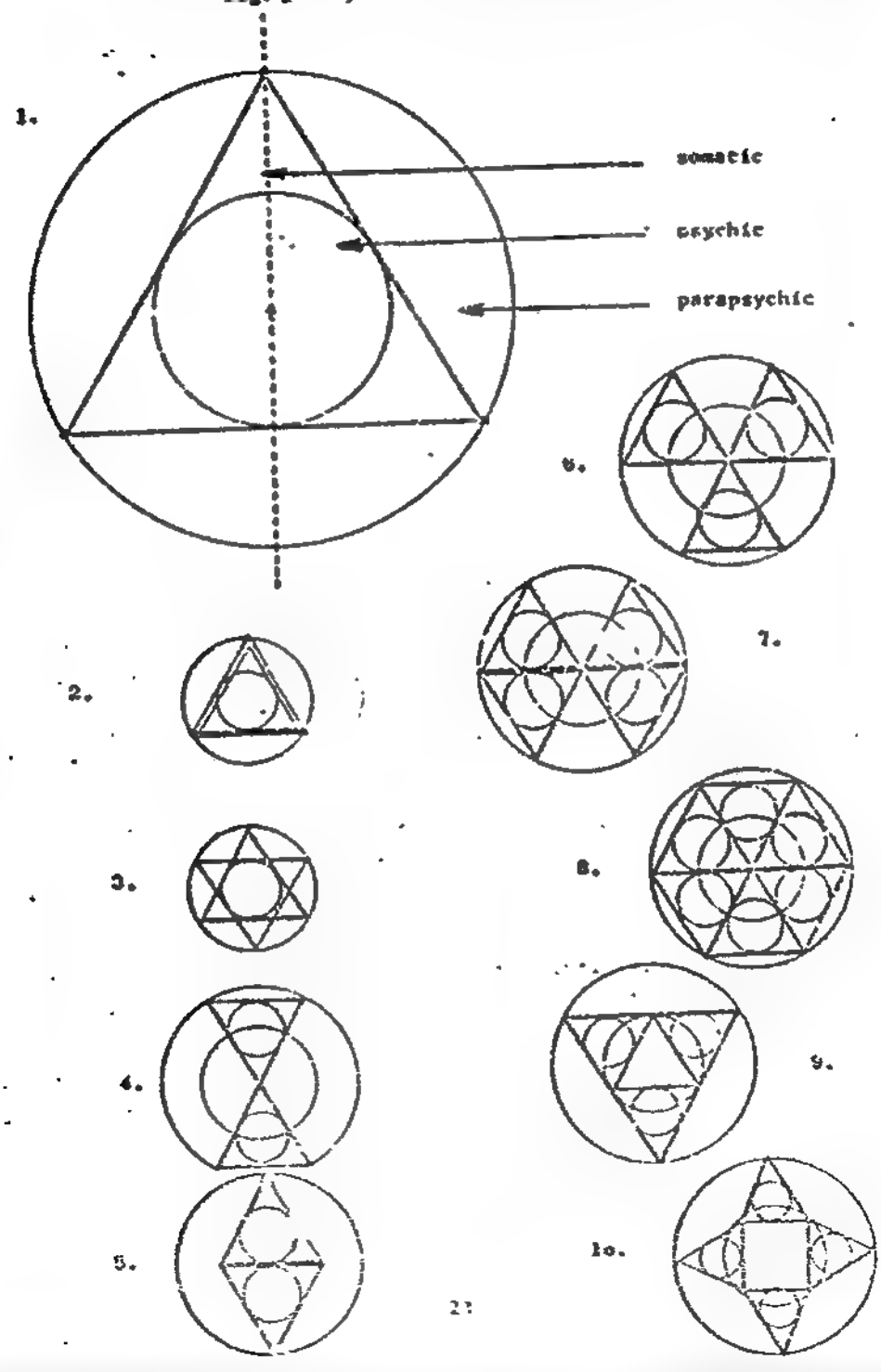
(U) The trend towards the theoretical development of models for cybernetic systems incorporating psychotronic phenomena has been augmented by a psychotronic model of man proposed by Josef Wolf of Prague. As an integral part of the psychosomatic picture of human existence, a psychotronic model of man is an entirely unique contribution to the study of the concept of man. From an anthropological viewpoint as well as from broader aspects that cover the comprehensive investigation of human existence, such a model is needed within the framework of other human sciences, particularly anthropology and psychology. A psychotronic model of man based on present knowledge of psychology, anthropology, and the medical sciences, not only offers an entirely new concept of man as an individual and as a species of living beings, but also permits new approaches to the solution of human psychosomatic disturbances and defects.

The experimental psychotronic model of man, which Wolf presents in rather simplified and schematic form (see Figure 2) may serve this purpose. The concept of this model is universal, i.e., it applies not only to man (regardless of sex, age, etc.) but to any living being as well, whether terrestrial or extraterrestrial.

The model includes the principal spheres of man: (1) the somatic or biological sphere, denoted by a triangle against the base; (2) the psychic or mental sphere, designated by a circle inscribed in the somatic triangle; and (3) the psychotronic or parapsychic sphere, designated by a circle circumscribing the psychosomatic triangle. Because psychotronic coupling in man usually occurs on the basis of communication between at least two individuals, the principal types of such connections are also presented.

Type 1 or the ego, for example, is the psychotronic model of man as an individual, i.e., a sort of psychotronic unit, a basic element or initial point. Type 2, called identical, is the ideal type of psychotronic and psychosomatic identification between two individuals. Type 3, called platonic, is the ideal type of purely psychic and psychotronic connection. Types 4 and 5 can be called telepathic, with minimal to maximal psychosomatic coupling. Here, a different theoretical interpretation based on the assumption that there exist two different modes of telepathic transfer is also feasible. Types 6, 7, and 8 are characterized by some genetic or psychosomatic coupling among several individuals (relatives, etc.). Types 9 and 10 can be regarded as examples of higher psychotronic coupling involving many individuals; applications of such models will be feasible only with perfect mathematical-physical tools and a corresponding system of psychotronic knowledge.

Fig. 2 Psychotronic Model of Man (U)



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Recently the most important source of new questions concerning man has arisen from the need to humanize the technical sciences, where man is often subordinated to the operation of machinery and to the technocratic apparatus, rather than the other way around. Specifically, where the human factor is completely relegated to the background and where human activity remains only on the fringe of human existence, human shortcomings, defects and failures are the most frequent; technological dehumanization may have affected not only individuals but entire groups, and perhaps even all of society. Wolf thinks that the primitive peoples — i.e., the ethnic groups of aborigines who still live at the lowest cultural and economic level in the world, and who belong to so-called primitive, preliterate and preclass societies — might be one of the most rewarding sources for studying psychic phenomena and for modeling the psychotronic profile of man, since they have not been culturally dehumanized by technology.[29]

Czech investigator M. Cernousek of Prague[30] suggests that primitive levels exist in all human minds and that there is a regressive nature to telepathic phenomena. By regression he means some "primitivization" of behavior, a return to older psychic functions on the ontogenetic plane. This behavior change is characterized by an abandonment of and withdrawal from the rational components of the human psyche — a complete detachment from reality or from the perceived environment. The end effect of this detachment from reality is a spontaneous sinking into a state that can be characterized as one of primary, primordial empathy. Although Cernousek describes the parameters for obtaining certain levels of regression in modern man, his theory does not encompass any of the concepts of biological energy transfer. Instead, he appears to accept the theory that the human brain is analogous to a highly sophisticated data bank in which all of life's experiences and impressions, consciously perceived or subliminally registered, are stored. Cernousek's idea of telepathic communication involves a high level of empathy between individuals; when such empathy exists, he feels that information transfer occurs as a result of nearly instantaneous and simultaneous processing of similar stored information bits by both sender and receiver. The net result is a coincidence of opinion concerning the telepathic message's content.

Cernousek's theory is based on a great deal of research. The Soviet and Czech literature on psychology, creativity, and the evolution of human existence is extensive. A huge volume of data has been compiled on the brain's memory capacity. The Czechs claim that 1973 experiments employing LSD have lead them to the conclusion that all of man's activities and experiences, whether perceived intensively or less intensively, are stored. They are now investigating the quantity of information the brain can process per unit of time, its bit capacity, and how this becomes manifest at the level of the conscious and the unconscious. The objective of this research is to make the process of cognition more economical. Czech scientists have likened the neuron to an integrated modular element that contains a resistor, a capacitor, and perhaps as many as 1,000 times seven

billion, or seven trillion semiconductor elements in operation, and another seven trillion in reserve. The brain has about 14 billion nerve cells. If only 10 billion are able to receive information at any one time, and the transmission capacity of a nerve fiber is 14 bits per second, then this means that the brain is able to receive 140 billion bits of information per second. Thus the memory capacity of the brain seems to be a million times greater than that of current computers. For ordinary perception and deliberation, 14 to 16 bits/second are adequate. But for more complicated perception and deliberation, such as the solution of a mathematical problem, etc., about 20 bits per second are needed. The brain's great reserve bit capacity may indicate that unconsciously and subliminally, man may be perceiving far more information than what has been assumed previously. Experiments with known telegnostics seem to confirm this, since they apparently process and evaluate a huge quantity of information within an unimaginably short time.

Czech theoretical cyberneticians are proposing the construction of computers that will "create" and possess at least a degree of intuition. However, the Czechs admit that this concept is somewhat premature, because they do not yet understand these processes in man and are unable to describe them adequately. Parapsychology may eventually provide such essential knowledge about these processes and thereby help cybernetics in solving the problem of teaching computers to create. The point is not merely to build more-perfect computers, but to design computers with qualitatively new functions. Work is now underway on a fourth generation of computers, and a fifth generation is being planned. The Czechs believe that parapsychology is already capable of offering cybernetics fruitful models.[31] In the opinion of some cyberneticians,[32] the present prostheses that replace missing parts of the body are foreign bodies within the organism, regardless of how perfect they may be. Once the technology of molecular circuits is mastered it will be possible to integrate perfectly a prosthesis and the central nervous system's information system. From there it will be only a short step to direct man-machine communication. Understanding of molecular circuits will also clarify the mechanisms of extrasensory communication between people.

The Soviet-Czech team approach to parapsychology research, not widely used as yet in the West, will advance them into direct man-machine communication, creative computers, and eventually into cyborgs, i.e., human inductors coupled with physical psychotronic instrumentation.

Frantisek Kahuda of Charles University, Prague has expanded on the original "neutrino" theory proposed in 1966 by Ye. Trinov of the Soviet Union. Kahuda and other Czech researchers have demonstrated that space (mental horizon) and time (mental time) in the world of mental processes have characteristic properties that should be in accord with the properties

of the particles that are the material vehicles of such processes. These are particles that in man's internal relativistic mental process may have a velocity $v = c$ (c equals the velocity of light in vacuum) without violating in the external physical world Einstein's postulate that the maximum feasible velocity is $v < c$. Such particles, essential to mental processes, have not been discovered to date. Kahuda calls them mental ions or "mentions."

For physical microparticles other than luxons, which have a velocity $v = c$ (photons and neutrinos), Olexa-Myron Bilaniuk and E.C. George Sudarshan introduced in 1969 the concept of tardyons for subliminal particles traveling at velocities $v < c$, and the concept of tachyons for physical superliminal particles traveling at velocities $v > c$. The actual existence of tachyons with an imaginary rest mass, has not been proven so far. Thus, the predicted tachyons correspond to Kahuda's mentions traveling at velocities $v > c$; the tardyons and luxons correspond to the mentions traveling at velocities $v \leq c$. However, the essential difference between tachyons and the Czech mentions is that tachyons are supposed to be particles of the physical microworld and hence also of inanimate nature, whereas mentions are particles formed by living organisms, specifically by their nervous systems, that represent matter on the highest level of organization, with the most complex and finest structure. Moreover, Kahuda's theory does not require the introduction of imaginary rest mass as in the case of tachyons; it predicts the real existence of mentions, based on fairly accurate laboratory measurements of the physical time and mental time of the investigated mental material motions.

In agreement with the laws of the electron's quantum field theory, Kahuda assumes that an entire conglomerate of elementary mention fields, specific to the individual mentions, forms through interaction and transmutation, a single common mention field in which the mental material motions take place - a sort of metaetheric environment that is linked to man's living organism and exists in nature independently of the will of all human beings. During the mental process of thinking one mental particle "changes" into another, however Kahuda does not designate any particle as primary and another particle as secondary. These constant changes and mutual transmutations reflect the psychic world's material homogeneity. The basis of this homogeneity is the motion of mentions as universal material particles of the human psyche. From the theory based on the principle of quantum mentiodynamics Kahuda has proposed the following formula for total mention energy:

1)
$$E = \frac{E_p(B)}{\text{const}} \cdot \frac{m_o c^2}{1 - \frac{v^2}{c^2}}$$

where Ep(B) is the potential (psychic) energy of the investigated respondent. From this equation it follows that the rest mass of the mention, at the moment when the mental process starts (i.e., when the respondent emits the first mention), and when numerically Ep(B) = E, is expressed by the relationship:

$$2) \qquad m_o = \frac{const}{c^2 \Omega_o^2}$$

where $\Omega_o = \frac{1}{0}$ is the rest-time factor of man's mental abilities. Thus, the mental structure (nervous system) of each respondent forms and emits its own mentions whose rest mass, according to experimental results to date, is approximately 10^6 to 19^6 times smaller than the rest mass of the μ-meson, which is $m_0 = 10^{-12}$g to 10^{-13}g. The smallest values of total mention energy that were measured indirectly at the moment when the mental process began ranged from $0.384 \cdot 10^{-10}$ to $9.744 \cdot 10^{-10}$ erg, which is approximately the same level as the energy of X-rays; the quotient of this energy range's relative amplitude is roughly 25. Kahuda assumes that after the commencement of the mental process, in the course of its formation, the velocities of the mentions' material motions may increase severalfold, so that the total mention energy according to equation 1 may be considerable, even though the average respondent's initial energy is equal only to the mean energy necessary for the visual stimulation of the human eye ($2.1 \cdot 10^{-10}$ erg/sec). For high velocities Kahuda thinks that it will now be possible to actually develop quantum mentiodynamics as the quantum theory of mention fields.

Mention energy, which may be the essence of the propagating changes and energetic information in mental processes, is an as-yet unknown form of energy in human beings. It occurs in quanta that cannot be measured directly with the instrumentation presently available. Therefore, Kahuda measured the quantitative values of potential energy (Ep(B)) indirectly.

Kahuda's results indicate that electromagnetic processes alone cannot be the vehicles of psychic processes, and that within the framework of the entire complex mental structure there must also exist another carrier of mental processes, one that permits the propagation of psychic reactions and interactions at velocities greater than the velocity of light in vacuum. In Kahuda's opinion, it is indisputable that mentions do exist, but he points out that the discovery and experimental verification of mentions will require a thorough theoretical knowledge of their possible characteristics and the most sophisticated and most accurate measuring equipment that science will be able to develop.[33]

SECTION IV - TELEPATHIC BEHAVIOR MODIFICATION

Part A - Basic Research

Behavior modification through telepathic means is in itself applied research. The changes or alterations of human activity desired can be either beneficial or detrimental to the percipient. Soviet research in the field of behavior modification by telepathy dating from the early 1920s through the early 1970s has had one major objective — application of techniques. In telepathy research, unlike research in most scientific disciplines, the applied phase preceded the basic phase. To put it simply this is why telepathy is still called a phenomenon, both in the USSR and the West. The phenomenon of telepathy has many applications, one of which is behavior modification. Basic research therefore applies to the phenomenon itself; this is covered in Part I Section II and Part II (Psychotronic Generator Research).

Part B - Applied Research

Between 1920 and 1943, L.L. Vasilev conducted numerous experiments involving telepathic mental suggestion; his first work involved the mental suggestion of motor (muscle) movements. This early work was based in part on the published results of similar experiments conducted by Dr. Joire[34] of Lille, France. Vasilev's human test subjects were asked to perform various muscular movements through the medium of telepathy. For comparative purposes some tests were made with hypnotized percipients, while others were placed only in a relaxed state. During the same time frame (1920-1943), Vasilev also conducted experiments involving the mental suggestion of visual images and sensations with and without hypnosis. Vasilev's results indicated that it was altogether possible to telepathically suggest and produce voluntary, controllable motor acts as well as influence involuntary, uncontrollable movement. He noted that some of the best subjects for the suggestion of motor acts were unsuitable for mental suggestion of visual images and vice versa. Apparently there was no visible positive correlation between these two variants of telepathic susceptibility. Some of the subjects under hypnosis responded more readily to verbal suggestion of a sensory nature while others were more responsive to verbal suggestion of the motor type. This observed variance applied for both mental and verbal suggestive techniques. After a thorough series of experiments, Vasilev concluded that mental suggestion involving hypnosis would provide the most fruitful results.[35]

According to Ostrander and Schroeder,[5] the ability to telepathically produce sleep-wake states (obliteration of one's consciousness) from a distance of a few meters to over a thousand kilometers became the most

thoroughly tested and perfected Soviet contribution to international parapsychology. Parapsychologists in Leningrad and Moscow demonstrated the telepathic manipulation of consciousness and correlated it with systematic EEG recordings. The Kaumov-Sergeyev-Pavlova team found that EEG recordings changed dramatically when the telepathic impulse contained a message affecting human emotions. Transmission of several successive emotions of a negative character elicited the appearance of cross-excitation of the brain. It changed the spontaneous EEG character to the tired state of the brain, dominated by slow, hypersynchronized waves of the delta and theta type. Percipients of unpleasant emotions followed by positive emotions (feelings of calmness or cheerfulness) regained normalized EEG's within one to three minutes. Other Soviet tests included sending to the percipient the anxiety associated with suffocation and the sensation of a dizzying blow to the head. Pavlova, Sergeyev and Kaumov uncovered impressive data on the power of thought and concluded that a person doesn't have to conjure up his own "nasty" thoughts; someone else can do it and telepathically transmit them to him. S. Serov and A. Troskin of Sverdlovsk demonstrated that the number of white blood cells rose by fifteen hundred after they suggested positive emotion to patients. More important was the observation that after impressing negative emotion, the white cell count decreased by sixteen hundred. Since leucocytes are one of the body's main defense mechanisms against disease, such a telepathically imposed shift in cell count could be used in altering human health. In similar research the Czechs found that intense mental activity in the sender caused, at a distance, a slight change in blood volume in a resting percipient. Measurements were made with a plethysmograph. Experiments in the West have verified this phenomenon. Soviet and Czech research in manipulative telepathic techniques has also included experimental transmission of kinetic impulses, sound, and taste.

Outside of the Soviet and Czech research on the manipulative possibilities of PK and psychotronic generators, the emphasis on manipulation by means of telepathy still involves the use of hypnotism. Many Soviet and Czech scientists are using this technique as a means to try to identify the "carrier" of telepathy but others may be conducting such research for more devious reasons.

Dr. Stefan Manczarski of Poland predicted that the field of telepathy will open new avenues for spreading propaganda. He feels that the electromagnetic theory is valid and believes, therefore, that telepathy can be amplified like radio waves. Telepathy would then become a subtle new modus for the "influencers" of the world. Some Western followers of psychic phenomena research are concerned, for example, with the detrimental effects of subliminal perception techniques being targeted against US or allied personnel in nuclear missile silos. The subliminal message could be "carried" by television signals or by telepathic means.

The potential applications of focusing mental influences on an enemy through hypnotic telepathy have surely occurred to the Soviets. The bulk of recent telepathy research in the USSR has been concerned with the transmission of emotional or behavioral impulses and the study of physiological responses to PK exercises, etc. In their exploration of telepathy, they are seeking the eventual capability to reproduce and to amplify the phenomena so that control is feasible. Control and manipulation of the human consciousness must be considered a primary goal.

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PART II

PSYCHOTRONIC GENERATOR RESEARCH

Psychotronic generators (also called Pavlita generators after the inventor) are small devices said to be capable of drawing biological energy from humans; the energy is accumulated and stored for future use. Once charged with human energy, the generators can do some of the things a psychic subject can do, but, according to the inventor, Robert Pavlita, can be charged by individuals possessing no psychic ability.[5]

The concept of man as a source of unusual energy dates back at least as far as ancient Chinese and Hindu teachings, in which it was called "vital energy" or "prana." Between the 18th and 20th centuries it was called various things (animal magnetism, odic force, motor force, x-rays, etheric force, etc.) by rediscoverers of its existence. In contemporary Soviet and Czechoslovakian parapsychology this energy is called bioplasmic or psychotronic energy. The Czechoslovakian rediscovery of biological energy is credited to Robert Pavlita, an inventor and businessman from Prague who began work on his devices over thirty years ago.[5]

Some representative examples of Pavlita generators are shown in Figures 3 through 7. No details of their construction have ever been made available to Western observers, possibly because Pavlita eventually plans to seek foreign patents. It has been reported, however, that the devices are fabricated from various metals (steel, bronze, copper, iron, gold) and that their effects are a result of their form.[5]

Pavlita's generators can be charged by direct contact (e.g., rubbing or touching to the temporal region of the head) or by visually directing mental concentration upon them from a distance. The nature of the energy stored is still not understood, but over the years a number of observations about its effects have been reported. It can be reflected, refracted, polarized, and combined with other forms of energy. It creates effects similar to magnetism, heat, electricity, and luminous radiation, but is itself none of these. The energy apparently can be conducted by paper, wood, wool, silk, and other substances normally considered to be good insulators. The devices have been tested by commissions of experts from the Czechoslovakian Academy of Sciences and the University of Hradec Kralove in Prague. Static electricity, air currents, temperature changes, and magnetism, were eliminated as possible explanations for the observed effects. In addition, the energy exerted its effect through glass, water, wood, cardboard, or any type of metal and was not diminished.

According to both Soviet and Czech researchers, one major advantage of studying psychotronic generators is the reproducibility of their effects; in addition, they can be activated by nearly anyone, with or without any special psychic abilities. The devices may have other practical applications not related to parapsychology. The Czechs claim that irradiation of seeds with the energy enhances plant growth, and that industrial pollutants have been precipitated out of water by its action (Figure 7). These claims may be open to question, since in 1972, Zdenek Rejdak, head of the Psychotronic Research Section of the Czechoslovakian Society for Science and Technology, termed the experiments with plants and water "ineffective."

A recent newspaper article,[36] quoting Pavlita, reported that his generators could serve as weapons; no further details were given. No information is available on Czech efforts to develop psychotronic weapons, but Pavlita has stated that some forms of his devices can exert both favorable and unfavorable effects on living organisms, including man. In experiments with snails exposed to the energy from a generator, a state similar to hibernation resulted. When flies were placed in the gap of a circular generator (Figure 6) they died instantly. In another test, Pavlita aimed a generator at his daughter's head from a distance of several yards. Her electroencephalogram (EEG) changed, she became dizzy, and her equilibrium was disrupted.

In their present form and size, Pavlita's devices could probably exert an effect on humans at only relatively short range. It is possible that their size could be enlarged or their energy amplified, thereby extending their range. If the Czech claims for these devices are valid, biological energy might be an effective antipersonnel weapon. It would be difficult to defend against, since it apparently penetrates most common forms of insulation and its reported effects (changes in brain wave characteristics, disturbance of equilibrium, dizziness) could result in personality changes or physical discomfort which might alter combat effectiveness.

Soviet or Czech perfection of psychotronic weapons would pose a severe threat to enemy military, embassy, or security functions. The emitted energy would be silent and difficult to detect electronically (although the Soviets claim to have developed effective biological energy sensors) and the only power source required would be the human operator.

Fig. 3 Psychotronic Generator (U)

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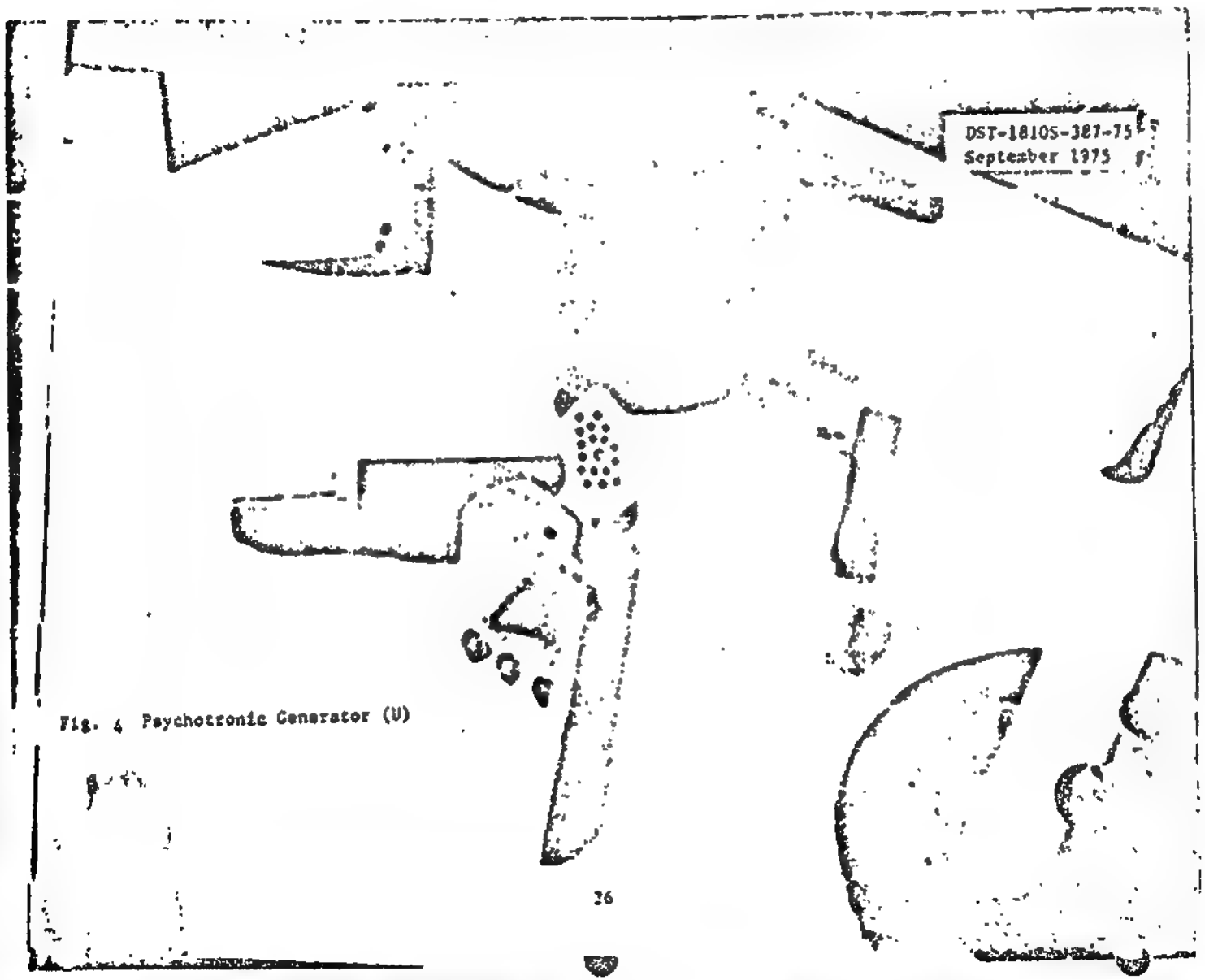

Fig. 4 Psychotronic Generator (U)

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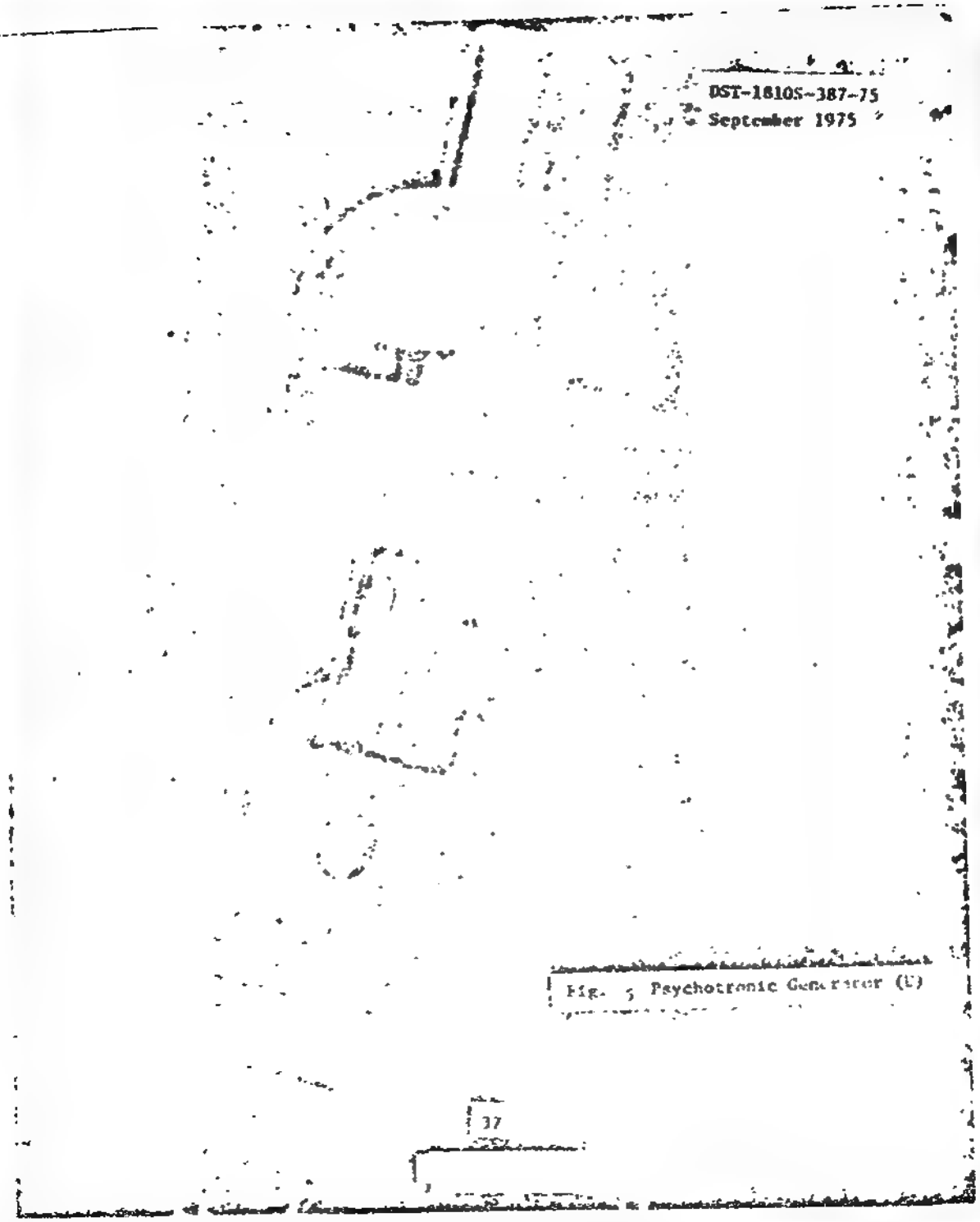

Fig. 5 Psychotronic Generator (U)

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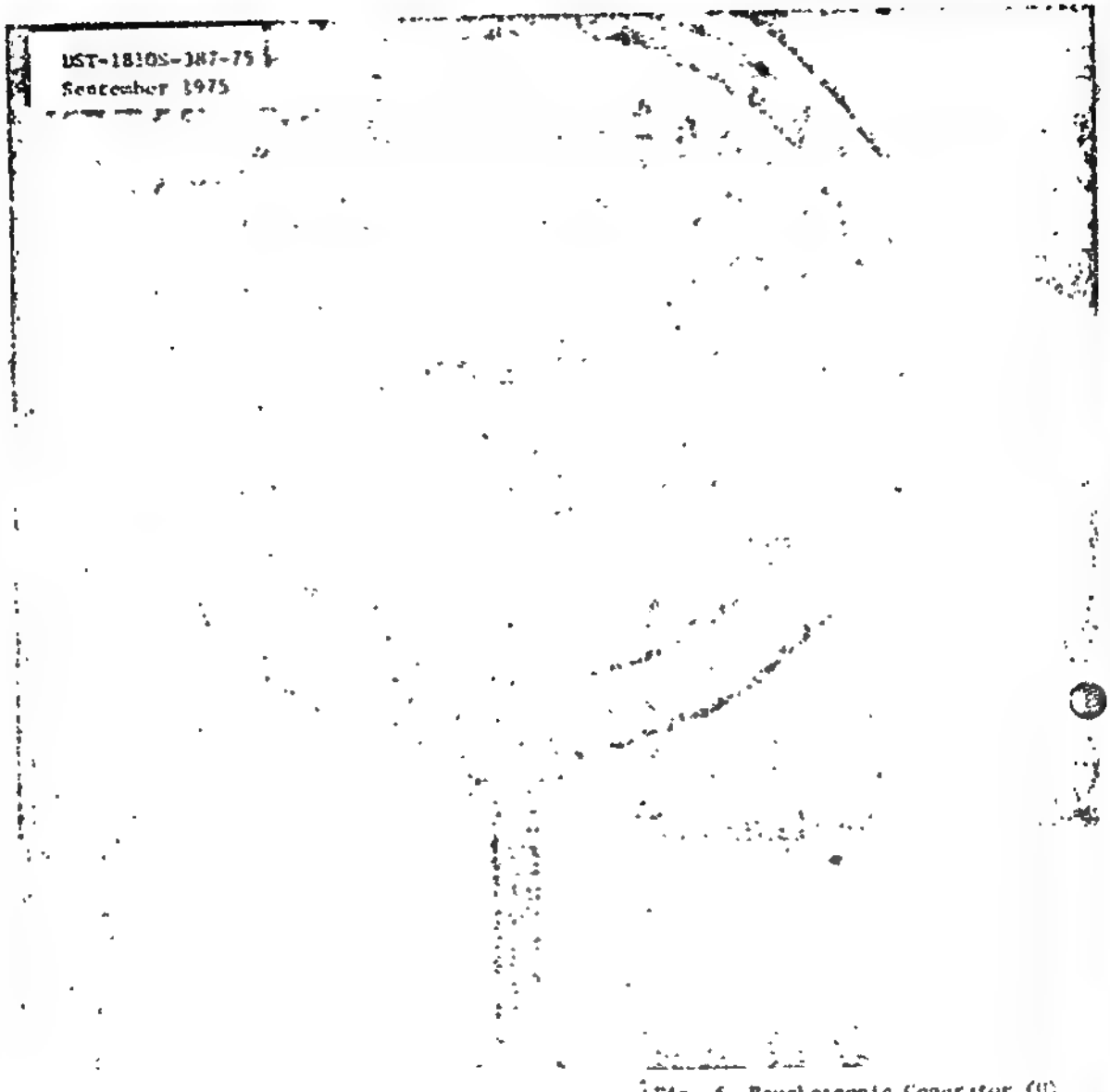

Fig. 6 Psychotronic Generator (U)

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Fig. 7 Psychotronic Generator (U)

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PART III

PSYCHOKINESIS RESEARCH

Psychokinesis (PK), or as it is sometimes called, telekinesis, is the ability to influence animate or inanimate objects at a distance, without physical contact, by means of uncontrolled or controlled biological energy fields. Some, but not all, of the effects of PK include: initiation or cessation of motion in inanimate objects; apparent neutralization of the effect of gravity on inanimate objects (levitation); induction of changes in physiological processes of animate matter; the creation of measurable electric, electromagnetic, electrostatic, magnetic, or gravitational fields around target objects; and the imposition of images on shielded photographic emulsions.

Current Soviet and Czechoslovakian parapsychological research emphasis is on identification and quantification of the generated bioenergetic force fields, identification of the physiological processes underlying their origin, and development of practical applications of PK energy.

There are fundamental differences between the Soviet and Czech approaches to PK research. Since paranormal research was granted political respectability in the Soviet Union in the 1950's, Soviet scientists have concentrated their investigations on a relatively few, highly "gifted", psychic individuals, and have attempted to determine what (if any) physiological attributes underlie their capabilities and differ from those of non-psychic subjects. Parallel with these efforts to determine cause(s), the Soviets have concentrated considerable effort on determination of the nature of the energy fields formed and to attempts to determine whether all psychokinetically gifted subjects create the same, or different, energy fields.

Czechoslovakian research is also cause-and-effect oriented, but appears to be governed far more by the belief that PK effects can be produced by a majority of people and that no inherent or highly developed psychic capability is prerequisite to the investigation and demonstration of PK effects.

Soviet research has taken several different directions in efforts to develop materialistic explanations for observed PK effects. This research has involved in-depth studies of the characteristics of the electrical field between subject and object, characterization of electrical fields immediately around the subject, study of bioelectrical fields by detection devices, study of subjects' brain wave patterns, and photography of the subjects' bioenergy fields. To date, Soviet scientists are by no means in accord concerning the nature of the forces involved, but all are in agreement that a physical energy is at work.[36]

Dr. Viktor G. Adamenko of the Moscow Institute of Radiophysics, Dr. Viktor Inyushin, of the Kazakh University, Alma-ata, and Dr. Genady Sergeyev of the A.A. Uktomskii Physiological Institute, Leningrad are the leading Soviet theoreticians studying PK. Both Inyushin and Sergeyev have developed theories based on the existence of a new form of energy--a form of biological energy referred to as "bioplasma". They consider PK effects as analogous to lightning accidentally charging a surface and feel that movement in PK occurs as a result of the interaction of the object's electrostatic charge and electromagnetic field with the human operator's field. The biological energy involved is under conscious direction by the subject, who can make a target object start or stop motion, change direction, or rotate. Sergeyev has developed instrumentation which measures changes in the bioplasmic field at distances up to 3 meters (9.9 feet); he has recorded fields of 10,000 volts/centimeter in the vicinity of a target object with no indication of an electrical field in the space between the subject and the object. According to Sergeyev, bioplasmic energy is maximally concentrated in the head region. He attributes PK to a polarization of the bioplasma in a laser-like fashion and refers to this as a "biolaser effect" which acts as a material force upon the object.[37]

Dr. Sergeyev has developed detectors that monitor the energy field during PK demonstrations. Although Western observers have been denied information on the construction of the detectors, (information reported to have been classified by the Soviet military), details may have been published by the Soviet Academy of Sciences. It is possible that the Sergeyev detectors are similar to those developed by an American, David Thomson. Thomson's devices, which have been used in human force field research at the University of Saskatchewan, Canada, consist of two capacitor plates, a preamplifier, and a line recorder like that of an encephalograph. Other Soviet force field detector research has been done at the Laboratory for Biological Cybernetics in the University of Leningrad Physiology Department. There, according to Soviet reports, Dr. Pavel Gulyaiev developed extremely sensitive electrodes capable of detecting the electrical force fields of nerves at distances up to 24

centimeters (9.46 inches). For more detailed information on Soviet biological energy detectors, the reader is referred to reference (5), pages 393-396.

Dr. Adamenko has conducted experiments to ascertain the role of electrostatic charges on the surface of target objects as the cause of their movement. Adamenko has advanced the theory that man may be anisotropic - i.e., man may be able to alter his external energy state in accordance with his internal energy state, and this ability in turn, may depend on his physiological processes. According to Adamenko, humans, animals, and plants probably possess electric fields as a result of spontaneous tissue polarization, and such fields may interact with externally imposed or induced charges. He proposes that the observed properties of living tissue come closest to the properties of electrets.[38] Electrets are defined as "forcibly" polarized bodies having comparatively high conductivity and the ability to maintain an external electrical field after exposure to adverse factors of either the external or internal environment. Adamenko has shown that the material basis of contactless interaction between man and objects results from an electrostatic field whose magnitude depends on man's physiological state. Other Soviet researchers have observed that when subjects are exposed to various external stimuli, their physiological state varies in both the character and magnitude of the bioelectret effect. They have formed the hypothesis that the polarization of living tissues is the explanation for contactless interactions between humans and between humans and objects.

Adamenko has also advanced the concept that, in the thermodynamic sense, living tissue may not be subject to the same physical laws that are valid for inorganic matter. He argues that living tissue may possess "new" properties (in terms of thermodynamics) when compared with inorganic matter. He believes that if living molecules differ qualitatively from inorganic molecules, then a distinction may exist between "living" and "technical" force fields. To demonstrate his point, Adamenko makes reference to healing by "the laying on of hands" (in Western terms "faith healing"). The Soviets have measured electrical fields between "healers" and patients, yet knowing these field potentials they have not been able to duplicate the beneficial effects obtained from humans by means of mechanically generated fields.

Aleksandr Dubrov, a biophysicist with the Institute of Earth Physics, USSR Academy of Sciences, has advanced the concept of "biogravitation" to explain PK. Biogravitation, as a term, was introduced by Soviet physicist V.A. Bunin in 1960, and was used to refer to the ability of living organisms to form and detect gravitational waves. Dubrov bases his theory on currently accepted concepts of molecular biology and high-energy physics.

In molecular biology, the capacity of intracellular molecules to alter their spatial structure is recognized. Biomolecules are capable of making the transition from a "liquid" to an orderly crystalline state. Dubrov defines this change as "molecular conformational change"; like present day high energy physicists, he believes that as a result of this change, the molecules are brought so close to each other that tremendous forces of attraction or gravitation emerge; when this occurs, a constant conformational field having a "quasigravitational" nature is formed. In Dubrov's opinion, this means that a vector, or force field, is formed at the subcellular level which is capable of attracting or repelling naturally occurring gravitational forces, or of itself emitting minute gravitational waves.[2]

Dubrov feels that psychic subjects may, in some manner, have the ability to synchronize their subcellular molecular conformational changes and thus generate attractive or gravitational fields of sufficient strength to alter electromagnetic or natural gravitational forces acting on a target object. Dubrov, like some other Soviet and Western parapsychologists, thinks that changes in the space-time continuum may be the basis for observed PK phenomena - i.e., time may be accelerated or decelerated by the psychic subject.

In 1973 and 1974, a Soviet psychic named Boris Ermolayev participated in a series of experiments at Moscow University. Ermolayev is reported to have the ability to levitate (suspend) objects in midair by concentrating psychic energy at a focal point in space.[20] In some of the tests, Ermolayev pressed an object between his hands, then slowly moved his hands apart until they were approximately eight inches from the object, which remained suspended in the air. Soviet scientists claim that all tests were conducted under the strictest controls and that no strings or other devices of any kind were used. Dubrov feels that Ermolayev's levitation powers can be used to prove that space-time and gravitational changes occur in the area between the psychic's hands and the object. He suggests that the transmission of electromagnetic energy of known velocity should be delayed when beamed through the levitation field.

Two female psychic subjects, Nina Kulagina and Alla Vinogradova, have been studied extensively by Drs. Sergeyev and Adamenko. According to Sergeyev, Mrs. Kulagina can control the beat of frog heart preparations, imprint images on shielded photographic emulsions, and move objects weighing one pound or more. In 1970, Dr. Sergeyev conducted experiments in which Mrs. Kulagina was asked to influence, if possible, a living frog heart preparation; such preparations normally continue to beat for several hours after removal from the animal's body. In one experiment, the heart was placed in a glass jar 2½ feet from Mrs. Kulagina. As she

concentrated on controlling its beat, electrocardiograms showed that the rate of contraction increased or decreased at her command. Five minutes after the experiment began, she stoped its beat entirely. When a second preparation was placed in the jar its beat was stopped in 23 minutes.

In other experiments, Mrs. Kulagina imprinted images on unexposed film sealed in black envelopes. During these experiments Sergeyev measured the energy around the psychic's body and found it to be half that of a non-psychic individual. This led Sergeyev to believe that she absorbs, or draws, energy from around her and then discharges it on the target object.

Mrs. Kulagina experiences considerable stress while she is being tested. Her pulse increases, as does her rate of breathing; she develops pain in her upper spine and the back of her neck. At the onset of her "activated" state she feels thirsty and has a taste of iron or copper in her mouth. During the activated state, she experiences occasional periods of dizziness and nausea. Her blood sugar level rises and within one hour following cessation of tests, a loss of weight (1.5 - 2.0 lbs) occurs. She experiences less stress when alone, and claims to respond best in an atmosphere of friendly mutual trust and belief. Her PK ability is mood dependent (her mood and the mood of the observers) and she expends more energy in a hostile or skeptical atmosphere.

The mechanical aspects of Mrs. Kulagina's PK effects are as follows:

a. Size and shape are more important than the physical structure of the substance she is trying to influence.

b. Weight and dimensions of objects she is trying to move are important; the weights vary from a few ounces to nearly one pound.

c. She finds moving a vertical cylinder easier than moving a horizontal one.

d. She causes no changes in the shape of soft objects during movement.

e. The direction an object moves depends on her will, and may be either toward or away from her. She can also cause rotational or vertical movements to occur.

f. Kulagina's optimum field effect occurs at approximately 1½ feet; her distance limit is approximately 3 feet and 4 inches, when the object to be influenced is 1 feet form the edge of the working surface. At these distances she is said to be able to move one object out of many.

depending upon where she centers her concentration.

The electrical aspects of Kulagina's effects are as follows:

a. An electrical field is generated in the vicinity of the object she is attempting to influence; however, there is no measurable field between Kulagina and that object and no sparks are observed.

b. She can exert no effect on an object situated in a vacuum.

c. Electrostatic screening has no effect on her powers, which seem to be better with the object under a dielectric cover, but she is unsuccessful during storms or other atmospheric conditions when there is a greater than normal amount of electricity in the air. She cannot, at any time, exert an influence on an electroscope.

d. She can cause luminescence of crystal luminphors and produce changes in the spectrum of visible light absorbed by liquid crystals.

Dr. Adamenko has found that Alla Vinogradova produces effects similar to those of Nina Kulagina, but undergoes far less physiological stress. In some of his experiments with her in Moscow, during which she moved a variety of objects about on a dielectric surface, a great deal of electrostatic (ES) energy was measured around the objects (supposedly enough to light a small neon glow tube). The measurements detected field pulsations which were synchronous with Vinogradova's respiration rate, heartbeat, and brain alpha rhythm pattern; however, the region between Vinogradova and the object contained no energy fields nor frequencies, and the ES energy increased in intensity as the objects were approached.

The results with Alla Vinogradova have led Adamenko to believe that there may be individuals who have the ability to build up an ES field on the body surface at will and project it as required.[38]

The Czechs, like the Soviets, are attempting to identify the source, or sources, of biological energy, but their research is not centered on psychically gifted individuals. Instead, some leading Czech parapsychologists have developed the theory that most people possess psychic capabilities and that such capabilities may best be demonstrated as observable PK effects. Czech parapsychology research is currently heavily PK oriented, probably as a result of Robert Pavlita's development of psychotronic generators (described in Part II of this study). The Czechs believe that the use of these devices for biological energy collection and concentration may make it possible for nearly everyone to cause PK effects.

Although the design and construction of the generators may be quite complex, they are simple to operate and require only minimal training in their operation. They have two other major advantages, they require no supervision of the subject by an investigator and the observable physical effects (motion, attraction, etc.) serve as positive, encouraging feedback for the subject.

One of Pavlita's devices for demonstrating PK is shown in Figure 8. The usual way of charging the device with psychic energy is to touch the temple area of the head with the hand, then touch the device. The accumulated energy then causes the spoked wheel to revolve. Pavlita claims that with training some individuals can learn to make the wheel turn by visual concentration alone.

Czech physicist Julius Kmecsky[41] has experimented with very light foil or paper discs or cylinders enclosed in circular containers; the effect of biological energy on them is generally a slow, but observable, rotation. They have no directly practical applications, but Kmecsky feels that they are ideal research tools, since they are simple, inexpensive, and require no special training or psychic talent for their operation. A device similar to Kmecsky's is shown in Figure 9. The cylinder is made to rotate by placing the hands above or alongside the device while concentrating ones gaze on the upper strip, or cross-bar. Kmecsky recommends isolation of the system from the motion of air and the effect of heat radiation by enclosing it in glass, metal, or other containers with provision for inspection through a glass cover. Motions in such enclosed spaces are slow and hence not too spectacular, but are nevertheless convincing. The slow rate of motion or the occasional immobility cannot be explained by the walls being impenetrable to outside impulses, because the device is able to detect the nearing of a hand, even through a thick layer of lumber, metal, water, etc. The cause lies somewhere else. The reaction of rotational systems in free and enclosed space is highly variable and changes with place and time. Kmecsky believes that changes of meteorological or even a cosmic nature may be the cause. Similar cases occur with physics experiments, where even the most carefully prepared electrostatic demonstration may not be successful if a change in weather raises the relative humidity or causes alterations in atmospheric ionization. Magnetic experiments are disrupted by the proximity of magnets, electrical wiring and appliances, and also by the aurora borealis, sunspot activity, or other cosmic causes. The causes of disturbances in PK experiments have yet to be explained. Kmecsky feels that no quantitative observations could be made in the privacy of homes, where diverse effects accumulate and overlap. Such effects are various radiations, changes in the conditions of illumination (as the intensity of diffused daylight, for example),

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Fig. 8 Psychotronic Generator

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and also the presence and changing positions of objects and persons, perhaps even in the next room or next apartment. Rotational systems enclosed in cylindrical containers are the most suitable for experiments. Angular enclosures are unsuitable for this purpose, since the motions observed in them are too slow and unconvincing. The best devices consist of rods or tubes suspended horizontally by a monofilament thread, foils in the shape of narrow rectangles rotating about their minor axis, or circular planes rotating about their diameter. The angular velocities of the rotational systems are sometimes very noticeable, but more often they are comparable to the velocity of a watch's minute hand. However, such systems are able to exclude other physical causes that could influence rotational motion. Placement in a steel container can form a magnetic shield. A glass jar or cylinder can be packed in a grounded Faraday cage of woven wire, or the space between the walls of two containers, one placed in the other, can be filled with water to shield against electrostatic energy. Despite such measures, the indicators react to changes in radiation from heat and light sources. They react especially sharply to direct sunlight, but they also detect changes in diffused daylight or the narrow beam of a flashlight, even from a considerable distance. Under stable conditions of heat and light, the indicators remain steady in some equilibrium position. A convincing example of this is the fact that when an indicator is permanently located, it settles in the same equilibrium position every night and remains in it until morning. After sunrise, even on a cloudy day, it occupies a new position and maintains it until it is subjected to a further impluse, for example, to a sudden clearing of the sky, to the presence of a person, to a change in the positions of nearby objects, etc. From such observations, Krwesky assumes that successful telekinetic experiments are very demanding in terms of their physical conditions. Such experiments cannot be performed at just any time or place. There are cases when the indicator's plane occasionally rotates without any intervention by the experimenter and without any perceptible cause. If such a case occurs under constant conditions of light and heat, and if it cause cannot be determined in the immediate environment, then Kreesky feels that the effect of distant sources of radiation, perhaps even of cosmic origin, may be the energetic force. The opposite of this seemingly spontaneous motion has also been observed; the rotational system will remain practically immobile, the indicator will not be affected much by either a gaze or the proximity of the hand, and a very slow displacement of only a few degrees is all that can be induced. Then, a suitable time and place must be chosen for the experiments so that the conditions may be as favorable as possible.

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Krmessky found that the indicators reacted not only to the nearness of a human body, but also to a slightly lesser extent to other animate and inanimate objects. They also reacted to the nearness of plants, vegetables, fruits, flowers, etc., and to subjects made of a variety of materials (metal, glass, etc.) so long as the surface areas were sufficiently large. When the dimensions of the objects were small, their activity was increased by roughing their surface, thus essentially increasing the surface area. Porous or spiny objects, such as sponges or sea urchins were especially suitable for experiments of this type. To insure that the temperature of these objects was the same as that of the movable systems, they were placed near the indicators for a sufficient length of time to allow for temperature equilibration. Only then were experiments performed, and the positive results obtained completely eliminated heat radiation as the source of energy.

Krmessky has found that although the hands and other parts of the body are effective in inducing rotational motion, a fixed gaze produces motion of greater magnitude, probably because it condenses the biological energy into a fairly concentrated beam, whereas impulses from the body surface are scattered. The "visual rays" were shown to exert an effect even when reflected or when focused through binoculars.

In Krmessky's experiments with inanimate objects and plants, man's role was of very brief duration and consisted only of placing the objects or plants near the device. In future experiments, Krmessky plans to position such objects by purely mechanical means. He feels that if positive results are still obtained, he will have demonstrated that interactions between objects and objects and humans and objects differ. At the present stage of his research, he supports his hypothesis as follows: the indicator distinguishes the effect of objects from the effects of man in the following manner: after an object has been placed near the indicator, the plane rotates from its original equilibrium position to a new equilibrium position and remains in it or gradually returns to the original position. When man affects the indicator, the final position of the indicator's plane depends on man's will, unless fatigue, that is an accompanying phenomenon of psychic exertion, sets in.

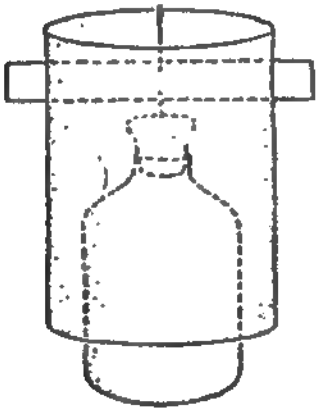
Krmessky believes that he is observing an energy field which is quite similar to magnetism, but a magnetism with some fine structure and a very unstable, fluid field. The poles of this magnetic field may be formed by very easily movable plasma particles that represent elementary magnets which, under the influence of external factors, are never in a completely chaotic state, but rather in a very unsteady state of partial ordering. Probably the occasionally observed line

oscillations of the indicater's planes at the beginning of rotation are actually the collective effect of the process of aligning the particles. Kmessky has yet to explain why, under seemingly identical conditions and in response to apparently identical stimuli, the rotational indicators of his devices are on one occasion attracted, and on another, repelled. Such erratic responses seem to indicate a double magnetic layer in which the poles are located side by side; this is not feasible if the poles are similar to electric charges. The indicators react as if there are positive, negative, and neutral loci alternately distributed in a relatively small plane. The materials from which the devices are built are such that they should not react to the inductive effect of the earth's magnetic field.

Kmessky has advanced the theory that the hypothetical poles in all objects on the earth's surface are induced by light, or by radiation in general. This "quasimagnetic field," then, could be a resultant phenomenon induced by interaction of plasma and radiation, without having to assume an analogy to the earth's magnetic field. He also accepts the hypothesis that in man's brain the processes of thinking are accompanied by the motion of plasma particles, and that this motion is the source of excitation or, more aptly, the modulator in this hypothetical field of very fine structure, able to transmit much more subtle impulses than the well-known electromagnetic field. But even in this case, he does not disregard the role of the electromagnetic field. Certain phenomena — the reflection of visual rays by polished surfaces, refraction, the effect of light on the polarity of objects, etc. — indicate that a common denominator for PK and for the electromagnetic field may eventually be found.

All of the Soviet and Czech research on PK is significant, especially that associated with the spectacular Soviet psychics Kulagina, Vinogradova, and Ermolayev. Kulagina's highly publicized ability to affect living tissues might be applied against human targets; in like manner, Vinogradova's power to move objects, and Ermolayev's levitational ability could possibly be used to activate or deactivate power supplies or to steal military documents or hardware. Robert Pavlita's generators and Julius Kmessky's PK indicators could be (and possibly are now) used to train large numbers of lesser known Soviet and Czech citizens to develop, enhance, and control their latent psychic abilities. Such a cadre of trained, but anonymous individuals could be used for any number of covert activities. Less spectacular, but more significant, is the fact that Soviet and Czech scientists are pursuing an interrelated, unified approach to determining the energy sources and interactions underlying PK and appear to be far ahead of their Western counterparts in reaching this goal. It will be but a short step from understanding to application and there is little doubt that many applications can be directed toward man for whatever purpose, be it good or bad.

Fig. 9 Psychotronic Rotor (U)



PART IV

OUT-OF-THE-BODY PHENOMENA

SECTION 1 - REMOTE VIEWING

Remote viewing refers to the ability of some individuals to project themselves mentally to remote or inaccessible locations and observe and report on details of terrain, structures, and other salient features. This ability is also referred to as astral or mental projection. It differs from telepathy in that the percipient does not piece together information bits to form an image, but rather, has a vivid sense of leaving his body and personally observing the target area in toto.

Remote viewing has been investigated in the US at Stanford Research Institute (SRI), Menlo Park, California. Psychically gifted subjects were tested for the ability by presenting them with map coordinates randomly selected on a double blind basis. The subjects were required to respond immediately with a description of the target area and were tested both with and without feedback as to their accuracy. According to the SRI report on this study, there were at least some categories of information in which the results exceeded any possible statistical bounds of coincidental correlation and precluded acquisition of data by known means.

(C) SRI reports of remote viewing research have not been publicized, but other SRI research on the psychic abilities of an Israeli (Uri Geller) and a British (Ingo Swann) subject has been widely cited in the US news media. Geller has been quoted many times on his avowed ability to transport himself mentally to any place of his choosing. Soviet parapsychologists are aware of Geller's claims (he has, in fact, been invited to the Soviet Union for tests) and continuing US interest in this phenomenon, nevertheless they have reported very little similar research of their own.

1970, Ostrander and Schroeder[5] reported that the Soviets were studying out-of-the-body phenomena in Yogis; no details of the research were given. In 1972, the US newspaper National Enquirer[43] reported that the Soviets had accomplished astral projection in the laboratory and cited the opinion of a US researcher that the technique would be in use for espionage before the end of the 1970's; once again, no details of the Soviet work were furnished. With the exception of these two reports, no other information is available on Soviet out-of-the-body research and no reports indicative of any interest have become available since 1972.

The Soviet's apparent lack of interest in out-of-the-body phenomena has led some US scientists to the conclusion that "they must be interested in it and investigating it," however, there is insufficient information at present to support the conclusion that such phenomena represent a specific area of classified Soviet research.

SECTION II - THE APPORT TECHNIQUE

The apport technique is a form of astral projection in which the psychic subject transports his "energy body" to a remote site, dematerializes an object, then transports it back and materializes it. In past reports there has been some very general speculation on espionage applications of the technique but to date no definitive reports, US or foreign, have verified the claims of psychics reputed to have the ability. There have been no Soviet or European Communist Countries' reports concerning research on apport techniques and if such research is being conducted, it is a well-kept secret. Lack of information on Soviet interest in the technique represents a major intelligence gap.

PART V

CONCLUSIONS

Soviet and Czechoslovakian researchers have accepted the reality of paranormal events and are primarily concerned with the formulation of a unified theory to describe the basic energy transformations involved. The Soviet emphasis on the electrostatic and electromagnetic components of the energy may play an important role in the final determination of the nature of psychical phenomena. This emphasis on energetics or interaction effects has lead to the concept that man must be investigated as a complete, integrated unit.

Soviet and Czech psychotronic research will eventually be applied to human problems. As this occurs, the question will arise whether this knowledge and the equipment developed will be used for the enhancement of human freedom and social development, or for regimentation and enslavement. Psychotronics could conceivably play a role in contributing to the survival of the human species; by emphasizing the interconnections between all living beings, it should help to reduce human aggressive tendencies. By the same token, it could also be applied to increase such aggressive tendencies and it has powerful potential for use as an effective weapon against groups of men and key leaders.

The Czechs claim that a direct transfer of biological energy from healthy to diseased or injured muscle is not only possible, but proven. The Soviets do not restrict the possibility of such energy transfer to any one physiological system, but state that biological energy transfer can be utilized to relieve human functional disorders of the nervous system, the internal organs, and the mind. In all cases, such medical applications of biological energy transfer are officially described as having beneficial results, but this may not necessarily be true. By analogy, conventional medical techniques can be beneficial, but when misapplied, can cause serious damage, or even death. By the same token, there can also be "psychic" malpractice, although the Soviets and Czechs are not likely to publicize this fact.

Both Czech and US researchers have described Robert Pavlita's work with psychotronic generators as possibly the most important contemporary development in the field of parapsychology and as a major contribution to the deeper understanding, mastery, and utilization of biological energy for human advantage. Just as in the example of direct transfer of biological energy for medical purposes, the use of such devices is not

necessarily intended to be beneficial. If Pavlita's devices can kill insects at present, their potential in the future after refinement and enlargement may well be for killing men. If bioenergy can be reliably controlled and focused by such devices, death could be caused by disruption of fundamental brain rhythms, heart control, or biological clock mechanisms.

It should also be pointed out that some of Pavlita's experiments seem to contradict Soviet results obtained with humans. As an example, the effect of his devices on suspended magnets is lessened if the magnets are electrostatically shielded, whereas such shielding has no effect in Soviet experiments with Nina Kulagina and Alla Vinogradova. It would appear that although the Czechs and the Soviets are examining the same phenomena, passage of biological energy through Pavlita's devices alters it in some manner. This raises the question of how well these machines can be controlled, and whether the alteration they induce on bioenergy is beneficial or detrimental.

Soviet research with Kulagina and Vinogradova indicates that energy interchanges, or transfer mechanisms, may be possible between gifted psychics and inanimate objects. There is evidence that Soviet research with these women also involves attempts to influence animate biological systems. In 1972, LaMothe[7] reported that Kulagina had the capability for stopping and starting the beat of an excised, living, frog heart. If true, it supports the contention that Czech and Soviet claims for "beneficial" applications of biological energy transfer are reversible - if a frog heart can be started and stopped, the same effects might be imposed on humans. Such dramatic effects illustrate some of the dangerous potential of controlled biological energy transfer.

In summary, it should be pointed out that Soviet parapsychologists continue to face problems similar to those of their Western counterparts, in that observed phenomena are unstable and there is low probability of proving them in controlled tests under selected conditions. Soviet critics of the science have been quick to seize on these two characteristics in order to categorically reject many of the phenomena, and they have belittled some forms of such manifestations by contending that the conditions under which tests have been conducted have not been adequate to preclude fraud. In view of this situation, the Soviets will continue to investigate methodology, since they feel it absolutely necessary to quantify observed phenomena. Although they have not yet done so, the Soviets may very well be the first to identify the field forces involved and the means by which they are generated, due to their concentration on the mechanisms and energetics involved.

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PART VI

TRENDS AND FORECASTS

1. TRENDS

Criticism: All Soviet science is very much influenced by political ideology. Parapsychology, as a result of the fleeting phenomena it deals with, is perhaps more vulnerable to ideological attacks than other science. Soviet critics point out that parapsychology, as a "pseudo-science," makes it enormously more difficult for the Party to eliminate the religious prejudices and superstitions. They claim that parapsychology, if viewed from the standpoint of Lenin, represents a revival of "bourgeois subjective idealism." Soviet critics claim that subsensory, subthreshold perception takes place in the presence of a stimulus and an analyzer and that such perception is subject to the very same physiological laws as is a subjectively registered perception. They admit, however, that the study of these laws is still far from the stage at which it will be possible to explain scientifically a person's subconscious psychological activity.

Concentration on Energetics: Faced with such criticisms, Soviet and Czech scientists engaged in parapsychology research have, more and more, stressed the "biological energy" concept, and are continuing to develop theoretical bases which will provide an integrated approach to paranormal phenomena. In order to bring their science more nearly in line with accepted theories of contemporary physics, they have postulated a "fifth state of matter" consisting of "free charged particles" arranged in organized patterns forming a uniform energy network. They are continuing to emphasize the electrostatic and electromagnetic components of such energy and argue that the eventual definition of this energy will allow them to ultimately integrate psychical phenomena into contemporary theoretical constructs of the universe.

Official Attitude: There are no indications of any organized or officially sanctioned attacks on Soviet/Czech psychotronic research, but such criticisms as have been noted have appeared in State-sanctioned publications. Continued monitoring of the Soviet and Czech press will be required in order to determine whether or not the official attitude toward the science shifts.

2. FORECASTS

In the next 15 years the Soviets and Czechs will continue to emphasize parapsychological research. Such research will, of necessity, involve the further development of appropriate instrumentation for the detection and

identification of the biological energy internal to the human body and its interactions with living or inanimate objects at a distance. The cyborg aspects (coupling of human inductors with physical psychotronic devices) will continue to be emphasized. During this time frame, research will progress from instrumentation development to computer assisted mathematical modeling of biological energy interactions. In order to establish a basis for such modeling, experimental techniques which can be controlled and replicated will be developed. This, in turn, will lead to the eventual improvement of research on paranormal phenomena since they will be made increasingly more producible and predictable.

The Soviets are known to be involved in development of inferential measurement and complex systems modelling (IMCSM) techniques.[44,45] IMCSM is especially adapted for application to the examination and study of many objects, especially those with many interacting parts, even when the behavior of the objects are partly or mostly determined by features of which the researcher is unaware or which he cannot observe. Soviet parapsychology research would probably be an ideal subject for the application of the IMCSM technique. If IMCSM is applied, the likelihood of a Soviet breakthrough in parapsychology is greatly increased. The Soviets are leaders in development of this technique and will probably apply it to parapsychology research.

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PART VII

[redacted]

1. Information is needed on the effects Nina Kulagina, Alla Vinogradova, and other Soviet psychics exert on magnetic tapes.

2. More information is needed on Robert Pavlita's psychotronic generators. Pavlita was quoted as having stated that he intended to obtain foreign patents on his devices in 1974, after which he would publicly divulge the details of their construction and operation. Information is needed on such patent applications and on Pavlita's explanations of their construction and operation.

3. More information is needed on the circuitry and response characteristics of current or proposed Soviet or Czech biological energy detection instruments. Such information is needed on instruments utilized for measurements at the cellular level and at the total body level.

4. Information is needed on the status of Soviet cellular radiation research. Present information indicates that they have identified ultraviolet (UV) radiation as one electromagnetic (EM) carrier or transfer mechanism from cell to cell. More information on this research is needed in order to determine whether it is fortuitous in regard to Soviet parapsychology research, or is an integral part of it.

5. Information is needed on the extent of Soviet mass-screening for identifying psychic citizens. Does the Soviet military have screening programs, and if so, which branches of service are involved? If such screening programs exist, are they conducted by psychological testing, or by direct observation of abilities to influence simple instruments such as those developed by the Czechs?

6. There are indications that the official attitude concerning parapsychology is changing in the Soviet Union and Czechoslovakia. Information is needed concerning the basis for the apparent changes in official attitude.

7. Is there any evidence of clandestine use by the Soviets of apparently electromagnetic or electrostatic devices against personnel, equipment, or radio and television stations?

8. Is there any evidence of a connection between the Soviet science of epialonology and psychotronic research?

9. Is there any evidence of the application of inferential measurement and complex systems modelling (IMCSM) techniques to Soviet or Czech parapsychology research?

APPENDIX

PERSONNEL AND FACILITIES

1. USSR - Affiliation Known

Adamenko, V.G.; Moscow Institute of Radiophysics

Bleykher, V.M.; Bekhterev Brain Institute, University of Leningrad

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Lomov, B.F.; Soviet Academy of Pedagogical Sciences

Luria, A.R.; Soviet Academy of Pedagogical Sciences

Mikhailova, L.; University of Novosibirsk

Naumov, E.K.; formerly of the Institute of Technical Parapsychology, Moscow

Nikolayev, K.; Bioinformation Section of the A.S. Popov All-Union Scientific and Technical Society of Radio Technology and Electrical Communications, Moscow

Pavlova, L.; Physiology of Labor Laboratory, University of Leningrad

Pushkin, V.; Moscow University

Sergeyev, G.A.; A.A. Uktomskii Physiological Institute

Shchurin, S.; University of Novosibirsk

Saazhnevsky, A.: Serbskiy Institute of Forensic Psychological Expertise

Zigel, F.; Moscow Institute of Aviation

Zinchenko, V.P.; Soviet Academy of Pedagogical Sciences

2. USSR - Affiliation Unknown

Arvashkin, A.; Moscow (psychic subject)

Ermolayev, B.; Moscow (psychic subject)

Kazhinsky, B.B.

Kulagina, N.; Moscow (psychic subject)

Kulin, Ye.T.; Minsk

Naumov, P.

Parnov, Ye.; Sverdlovsk

Presman, A.S.

Serov, S.; Sverdlovsk

Sysoletin, A.; (psychic subject)

Sysoletin, L.; (psychic subject)

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3. Czechoslovakia - Affiliation Known

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4. Czechoslovakia - Affiliation Unknown

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Miza, M.C.

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Wolf, J.; Prague

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